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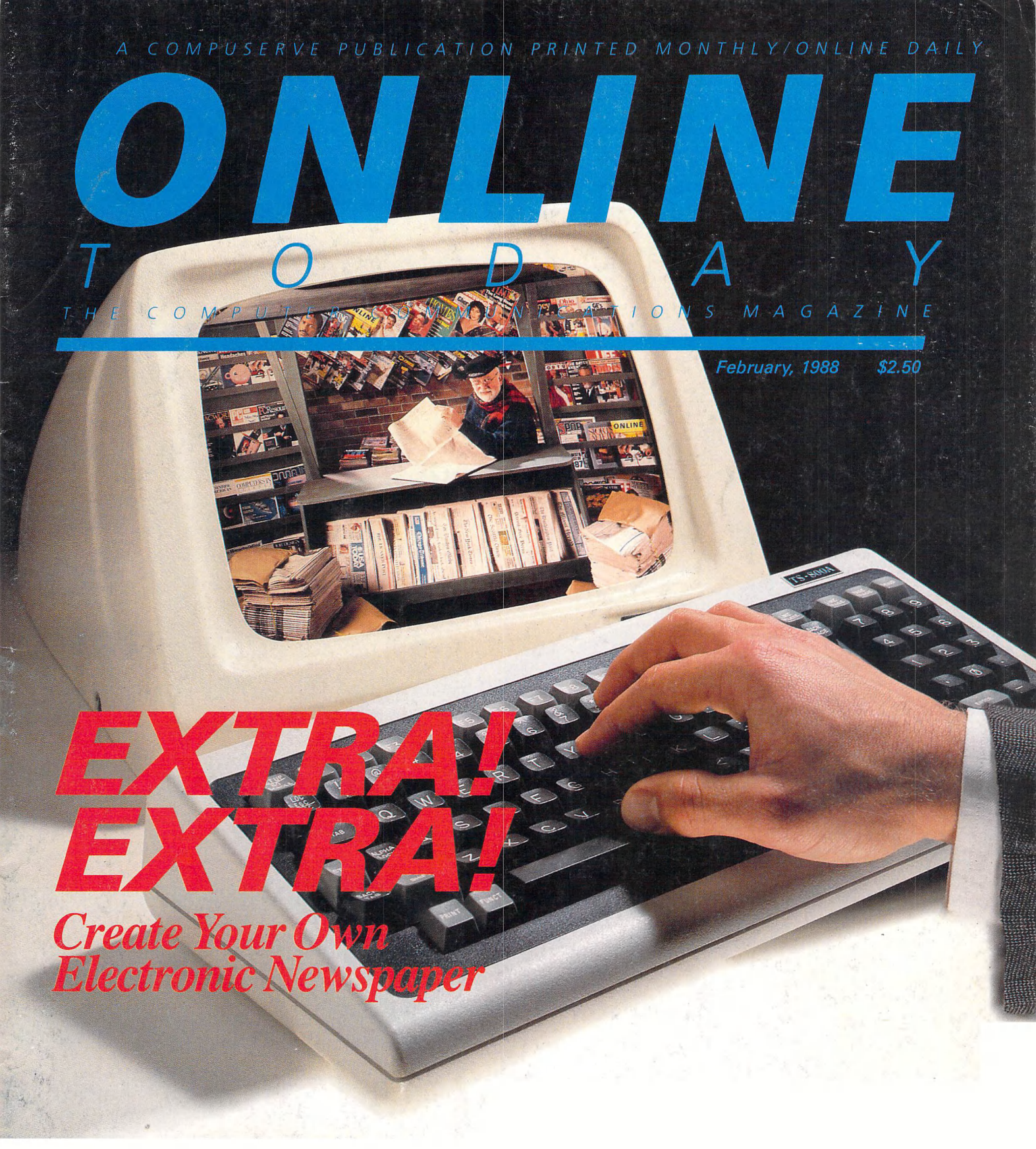

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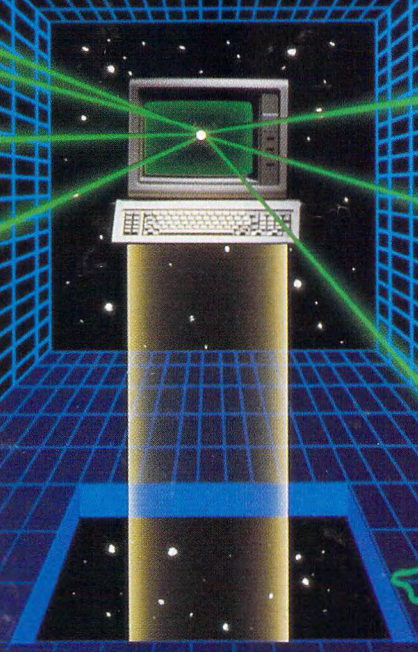

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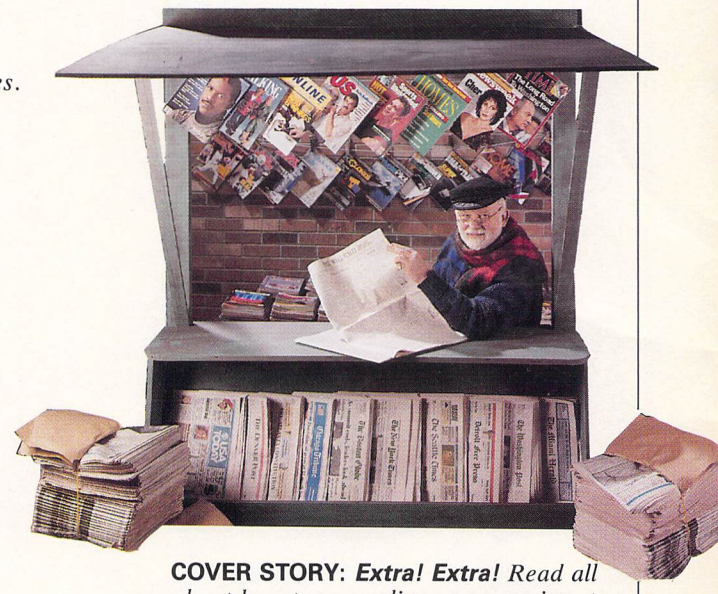

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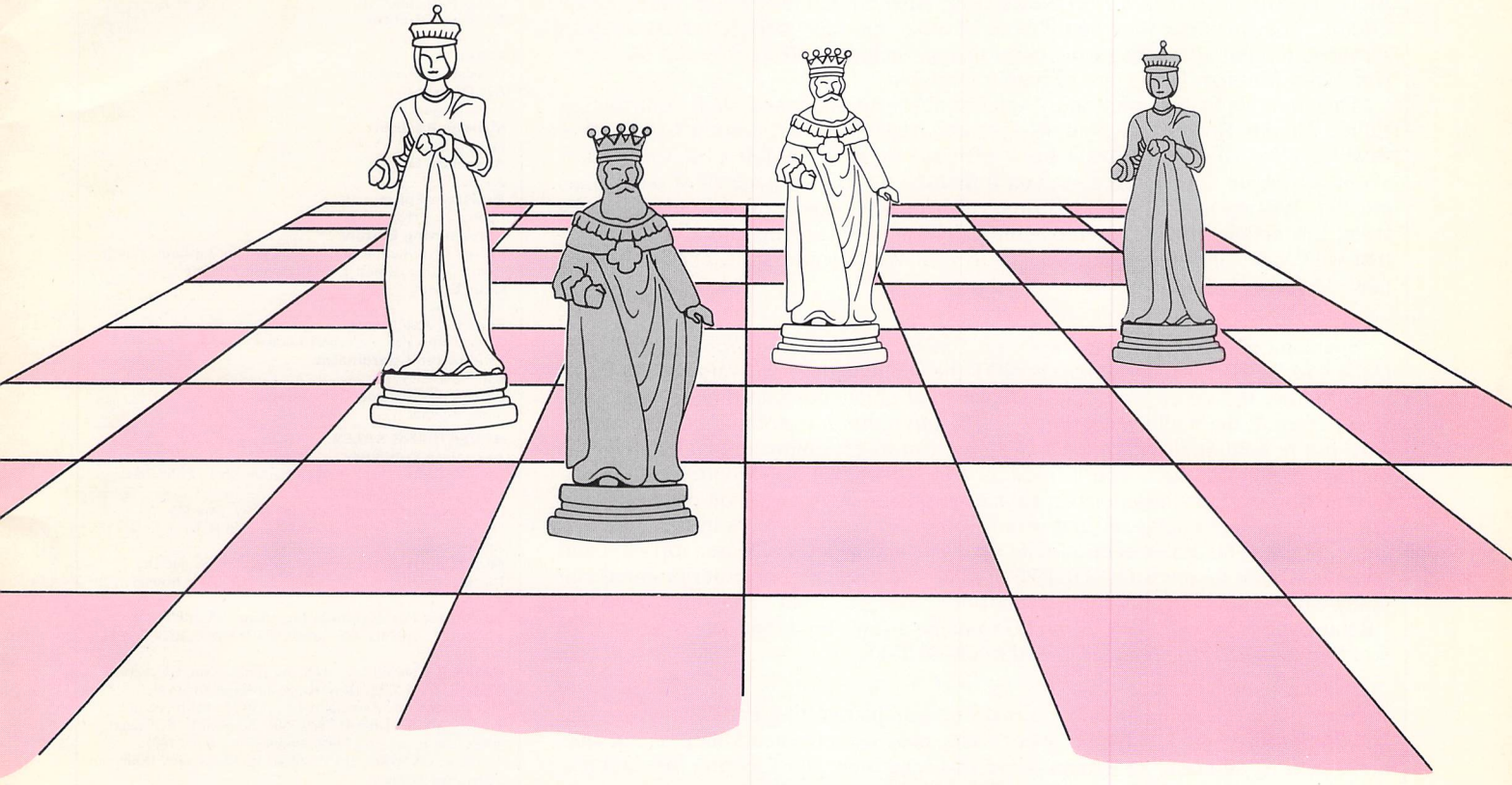

In honor of Valentine's Day, American Express challenges you to guess the identity of three royal couples.

The 25th person to correctly guess all three will win the Valentine Grand Prize...a dazzling Open Heart 14 kt. Gold and Diamond Necklace and a Men's Gucci Watch.
The first 24 with the correct answer will win a cuddly, Valentine teddy bear.
From February 2 to March 2, **GO AXM** to enter the Royal Challenge.
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GO AXM to take the Royal Challenge! Good Luck!

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DEAR READER

Certainly one of the most beneficial aspects of an online service is the ability to provide constantly-updated news that possesses the immediacy of broadcast with the permanence of print and the flexibility of easy data manipulation once it is obtained.

CompuServe recognizes such news products as a pillar of any well-rounded online service and responds by offering an excellent variety with true depth: The Executive News Service (ENS) provides around-the-clock clipping of major newswires including The Associated Press national wire, Reuters, OTC News Alert and *The Washington Post* Newsletter. Also offered are *Online Today Daily Edition*, The Business Wire and dozens of other specialty newsletters and related services. Recent additions to the news lineup, including NewsGrid and *McGraw-Hill News* (through ENS), are also now available.

This month's feature section by veteran newspaperman and *OLT* Contributing Editor Charles Bowen (see News/Reference, page 16) focuses on these and other news services. If you've always been intrigued by ENS but felt a bit awkward about setting up clipping folders, you'll find the tutorial on page 20 of particular interest. Written in the familiar Bowen "Getting the Most Out of CompuServe" style, this article provides step-by-step guidance to setting up effective folders that will "net" all the news of interest to you. While you're at it, check out the new 1988 Winter Olympics news service on page 23.

* * *

Speaking of news, did you know that *Online Today Daily Edition* (formerly *Online Today Electronic Edition*) is NOT the same as the print version? Many readers have the impression that it's a waste of online connect time to read what arrives free in the mail every month. The *Daily Edition* is nothing like the magazine you're holding in your hands. We urge you to get online and GO OLT just once to browse through. You'll find four times daily-updated Monitor computer/information industry news (seven days a week, 365 days a year on page OLT-90); constantly updated news for and about CompuServe subscribers in the CompuServe This Week section (GO OLT-50); the latest hardware, software and computer book reviews (GO OLT-200); a half dozen microcomputer-oriented columns with writers such as John Heilborn of "Ask Dr. John" and John Edwards of "Behind the Screens" (GO OLT-110) to name a few. Try it and let us know what you think in the *OLT* Feedback section on OLT-30.

* * *

With the presidential election primary season just getting under way, we couldn't let this "news" theme opportunity pass without mentioning one of the most exciting additions to CompuServe in a long time. It's Election '88, and it's complete up-to-the-minute coverage of the 1988 presidential election year races, including the primaries. Get on CompuServe and GO USA to read daily campaign news on the Campaign Hotline from the American Political Network. Also: candidate positions and schedules, "insider" commentaries, national poll results, discussion forums, online surveys and much more. Finally, you can write directly to the presidential candidates by using CANDIDATEgrams. For $1, a hard copy of your letter sent via electronic mail is forwarded to the campaign headquarters of the candidate you specify. Before you go out and vote, be sure to GO VOTE on CompuServe!

Douglas G. Branstetter
Editor

ONLINE TODAY

***Online Today*®, February 1988**
Volume 7 Number 2

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L E T T E R S

Coverage of Atari Products

As an Atari 8-bit personal computer owner, I find your lack of software and hardware reviews for my system quite annoying.

The last major mention of my machine was an advertisement encouraging me to go to the Atari forums. Also, each month, I see the Grolier Electronic Publishing ad showing a youngster hunched over a classic Atari 800 personal computer. How can you show this picture when you refuse to mention Atari products in your magazine?

I know quite a few CompuServe users with Atari personal computers and I think you're doing them an injustice by ignoring them in your publication.

Logan Rothstein
Raleigh, N.C.

Coverage of Amiga Products

I have noticed that your product reviews mainly cover IBM and Tandy products. I use an Amiga and would like to read about hardware and software available for my unit.

Kevin Hudson
Virginia Beach, Va.

Census Data

Recently I saw a notice that US Census data is available through an online database. I thought this information was offered on CompuServe but I cannot find anything to confirm that.

Carl Anderson
Macon, Ga.

Editor's Note: A database called CENDATA is now available to CompuServe Information Service subscribers. It includes census information and can be accessed by typing GO CENDATA.

Call Waiting

Thanks to Marty Silbernik for sharing his insights on how to override call waiting and avoid costly online terminations (Letters, December 1987). I took his advice and called the telephone office here in Maine and the code is the same: Precede your call with *70.

I also learned a couple of other things. If you're using a rotary-dial phone or an older modem that uses pulse dialing, you can accomplish the same thing with "1170." And if you're wondering how to re-install call waiting after you're done, don't worry; it's automatically reactivated when you hang up. This tip will save me much expense and aggravation.

David R. Hill
Cape Elizabeth, Maine

Send a Letter

OLT-30 Letters to the Editor *main menu. Lists all departments.*
OLT-31 Send a letter instructions. *Complete instructions on how to send a letter to the editor via the electronic service.*
OLT-32 Read letters *for other readers.*
OLT-33 Send a letter *to the editor. You will receive prompts for each step in the process.*

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Deluxe Call Waiting

Is there anything more annoying than having the Call Waiting feature on your telephone kick in and kick you offline? A new invention by a scientist at Bell Communications Research (Bellcore) can help.

Deluxe Call Waiting can temporarily suspend the Call Waiting feature and send the caller a busy signal.

Bellcore's Dennis Hannon says that complex software programs computerize switches to execute the multitiered signaling required between customers and telephone central offices and between the offices and persons calling on busy lines.

"By pressing a digit on the Touch Tone pad, the customer can instruct the telephone network to cancel the Call Waiting feature," says Hannon. Once you hang up the phone, Deluxe Call Waiting is activated again.

If you are interested in purchasing this feature, contact your local telephone company. Hannon says that not all telephone companies will offer it, however, and the rates they charge will vary from state to state.

Volumes of Verse Compacted on Disk

Organizing the vast reservoir of Tang dynasty poems, let alone looking up a key phrase, has been a monumental task and a time-consuming problem for researchers. This is not surprising, however, considering that the Tang poems, in printed form, consume 25 volumes of 10,000 pages.

But modern technology is helping to solve the problem. Using an IBM PC, scholars at China's Shenzhen University have placed 48,900 Tang poems on 95 floppy disks. Zhong Jialing, a Shenzhen University lecturer who helped develop the software, says the system is helping researchers "do things that people really can't do." He notes that "the computer can do in one second what it takes a person three months to do."

For example, says Zhong, the software instantly locates any verse or phrase in the Tang collection. The system then displays the complete poem and reports on its location in the printed volumes. "We can determine how many times a certain word is used or cross-reference it to compare contexts," he says.

Located across the border from Hong Kong, Shenzhen University is in China's largest special economic zone. The government routinely uses the school to test various modernization techniques. In this case, the Chinese leadership is pleased with the results of the project: The official Xinhua news agency reported that Beijing University plans to store all the poems of the Song Dynasty (960-1276) on a computer.

On CompuServe, poetry lovers meet in the Literary Forum (GO LITFORUM).

—John Edwards

Intercultural Exchanges Occur on PR Forum

Last fall, a special section devoted to international networking opened in the Public Relations and Marketing Forum.

Conceived by free-lance photographer and world traveler Ken Love, IntelNet links American public relations practitioners with their counterparts in other countries, especially Japan and Canada.

IntelNet originated after Japanese subscribers began to frequent the Public Relations Forum, finding it a good place to practice English. While traveling to Japan, Love met some of his electronic friends face-to-face. The experience gave him the idea for IntelNet.

Love is quick to point out that the new section is not devoted exclusively to public relations. He hopes it will become a gathering place for international subscribers, no matter what their professional interests.

Although differences in languages are obvious concerns, Love hopes to alleviate this by offering bilingual files in Data Library 10. The files include foreign business practices, helpful hints for logging on from other countries and tips for overseas travel.

Discussions in the IntelNet section of the forum message board have ranged from opinions on the trade dispute with Japan and Canada to differences in public relations practices in several countries.

Love is exploring interest in IntelNet among German subscribers.

For information on IntelNet, type GO PRSIG at any prompt or leave an EasyPlex for Ken Love at 74166,3601.

—Cathryn Conroy

Caution: Online Addict on Board

You have always wanted one of those bright yellow, diamond-shaped signs to hang in your car window (BABY ON BOARD, EX-WIFE IN TRUNK), but you have never found one that fits your identity. Now you can create your own on a printer-equipped microcomputer.

The Car Sign Designer Kit, a $29.95 offering from Zebra Systems Inc., of Woodhaven, N.Y., enables users to create their own automobile warning signs. The program comes with a PC-compatible disk, a liberal supply of yellow fanfold paper and two reusable plastic sign holders (complete with suction cups, of course).

"Sign Designer makes the perfect gift for that guy who has almost everything," says Stewart Newfeld, Zebra's president.

The program offers complete what-you-see-is-what-you-get design capabilities. Once printed, the sign can be slipped into the holder, without cutting or hole-punching, and attached to any surface. Then you can proudly proclaim:

CAUTION: ONLINE ADDICT ON BOARD

CAUTION: MY VIDEO DISPLAY RUINED MY EYESIGHT

CAUTION: TO ME, DRIVING IS JUST ANOTHER COMPUTER GAME

More information is available from Zebra Systems Inc., 78-06 Jamaica Ave., Woodhaven, N.Y. 11421; 718/296-2385.

Other, more traditional automotive products can be found on CompuServe by typing GO AUTO.

Freedom of Information

The amount of information provided by online databases and available at our fingertips seems unfathomable. However, believe it or not, some information still may be missing due to the whims of government agencies.

Last July, the Office of Management and Budget issued guidelines on how government agencies should handle Freedom of Information Act requests once each agency has dealt with the matter in its own way. Virtually everyone requesting information under the FOIA must pay a fee, ranging from $100 to as much as $10,000, based on search and copying charges.

Included in OMB's guidelines is a section recommending that news media organizations—including electronic database providers—be exempt from the FOIA fees, since they disseminate the information to others.

Although the OMB guidelines are considered fair, most government agencies are ignoring them and handling FOIA requests however they choose. Some agencies, such as the Occupational Safety and Health Administration, refuse to grant any organization a fee waiver.

Electronic publishers, who may not be recognized by some government agencies as legitimate news services, might therefore be charged a FOIA fee when more traditional media (such as newspapers or television stations) would be exempt, according to Lee Burdick, a consultant with the Washington, D.C.-based First Amendment Center for the New Media.

"This is an issue for our times. People will be shifting more to electronic publishers for news information. These publishers must be given the same freedom to get information from the government as more traditional media," she says.

The difference between the two forms of media is the method of delivery rather than the news content, she says, and such discrimination against electronic publishers could harm the industry.

For further information, contact Lee Burdick at The Media Institute, First Amendment Center for the New Media, 3017 M St., Washington, DC 20007; 202/298-7512.

Phone Hieroglyphics

Computers are apt to do some strange things.

Take the computer owned by Rochester Telephone Corp., of Rochester, N.Y., for example. Recently, the company's machine erroneously billed 4,800 customers for phone calls to Egypt. That's not Egypt, N.Y., mind you, but Egypt—land of the pyramids, mummified cats and the moonlit Nile.

"The computer misread the number dialed and determined they were coming from Egypt," says Diana Cala, an RTC spokeswoman.

Customers incorrectly billed were asked to pay the charges in full, Cala said. However, they received credit on the next month's bills.

Perhaps King Tut was trying to phone home.

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FDA to Regulate Computer Products

The US Food and Drug Administration announced that it will regulate some computer products.

The agency released expanded regulations on medically oriented computer products, but few companies outside of medical equipment manufacturers were prepared for the major policy shift. According to the FDA, the document, *Draft FDA Policy for the Regulation of Computer Products*, clarifies how the FDA applies existing statutory requirements to hardware and software computer products marketed for medical use.

Some software developers and computer and equipment manufacturers are concerned that new regulations could prove intrusive. Susan Knight, a Chicago software developer, is concerned that systems used in general business and not aimed specifically at medical practitioners could suddenly be subject to regulation. "We don't need another government agency in business," she says. "Now, it sounds as though we'll have another set of regulations to contend with when we write computer applications for a physician. Although the FDA claims to be disinterested in general business applications, too many government bodies have been known to unnecessarily expand their regulatory authority."

FDA officials, however, believe that the policy is unequivocal. "To the extent that computer products used in medicine are intended to affect the diagnosis and treatment of patients and are medical devices, the Food and Drug Administration must provide reasonable assurance that these products are safe and effective," notes a representative of the agency.

Interested parties who wish to comment on the regulations can address written comments to the Dockets Management Branch (HFA-305), Food and Drug Administration, Room 4-62, 5600 Fishers Ln., Rockville, MD 20857.

The complete text of the FDA announcement is available on CompuServe's AAMSI Medical Forum (GO MEDSIG).

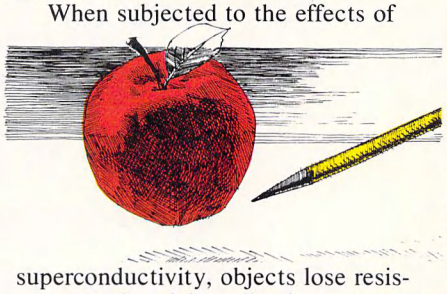
—James Moran

Up in the Air

At one time, levitation was a skill reserved for those who exaggerated their names with such superlatives as "The Amazing" and "The Incredible." But superconductor technology has lifted levitation off the vaudeville stage and dropped it into the classroom where teachers can put high-tech magic in the air.

Arthur B. Ellis, a University of Wisconsin chemist, and Glen Dirreen of the Institute for Chemical Education have developed a $25 kit that enables science teachers to easily demonstrate superconductor principles to their students. "We're trying to foster a greater appreciation for science and technology by making this equipment widely available," says Ellis. "It is important to get students excited about science."

When subjected to the effects of



King Associates

superconductivity, objects lose resistance to electricity, allowing currents to flow without friction. Scientists predict that the technology will someday allow the development of such marvels as ultra-high-speed computers, floating automobiles and highly efficient electricity transmission networks.

In the demonstration kit, tiny magnets are made to levitate above chips of superconducting material. With the help of a liter of liquid nitrogen, which cools the chips to a temperature of minus 321 degrees Fahrenheit, the magnets float to a height of one-fifth of an inch above the superconductors. The liquid nitrogen is not included with the kit, notes Ellis, but is available from hospitals, welding equipment supply companies and a number of other sources.

"Many technologies are expensive for schools that want to arrange practical demonstrations of them. For instance, it took years to get lasers into the classroom," says Ellis. "This kit offers science teachers an opportunity to capture young minds with a practical demonstration of a truly important technology."

For more details on the kit, contact Arthur B. Ellis at the University of Wisconsin; 608/262-1234.

Students, teachers and other CompuServe subscribers can discuss science-oriented topics in the Science and Math Forum (GO SCIENCE).

Computer Industry News

Online Today Daily Edition's Monitor section keeps you abreast of the latest computer and information industry news. Stories are added several times each day and the hot items are highlighted on our "front page," OLT-1. A week's worth of recent news is always available for review (OLT-20). To read today's news, type GO OLT-90 at any CompuServe Information Service prompt.

***MONITOR DAILY NEWS**	**OLT-160**
About Monitor	**OLT-359**
Behind the Screens	**OLT-130**
Calendar of Events	**OLT-1000**
Headlines	**OLT**
Letters to Editor	**OLT-30**
News This Week	**OLT-20**
Reporting News to Us	**OLT-352**
Special Reports	**OLT-2000**
Today's News	**OLT-90**

Anti-Pirate BBS

Over the years, computer bulletin board systems have garnered a largely undeserved reputation for fostering computer piracy. Now, a San Mateo, Calif.-based BBS is turning the tables on critics by actively combating online criminals.

Computer enthusiast Bill Bennett has dedicated his BBS to STOP, the Software Theft Opposition Project. According to Bennett, his board functions as a forum where interested parties can discuss the software piracy issue.

So far, notes Bennett, the BBS has attracted numerous pirates (whose identities are protected) and various industry representatives, including several staffers from Electronic Arts. BBS participants discuss the moral and financial implications of software theft and how users and software publishers can accommodate each other's needs, says Bennett.

To receive a free copy of the group's newsletter, send a self-addressed, stamped envelope to Project STOP, P.O. Box 3142, San Mateo, CA 94403. You can reach the BBS by dialing 415/349-8245.

Play Your Game Online

CompuServe's interactive and multiuser features make it a perfect medium for subscribers to play games in groups. It's little wonder then that multiplayer games were one of the earliest developments on CompuServe and continue to be some of the most popular services offered.

If you're fond of playing games with a group of friends, you're likely to enjoy one or more of the many CompuServe multiplayer games. The fact is that you play games on CompuServe about the same way you'd play them with a group of friends in your own game room. The only difference is that your fellow players may be across the continent or perhaps halfway around the world.

You can see the latest list of CompuServe's multiplayer games by typing GO MULTIG at any CompuServe Information Service prompt. By choosing a number from this menu, you'll be taken to another menu where you can read the rules of the game or go to the game area itself.

The rules of most games are relatively simple and even new users ought to be able to start competing quickly with others who are online at the same time.

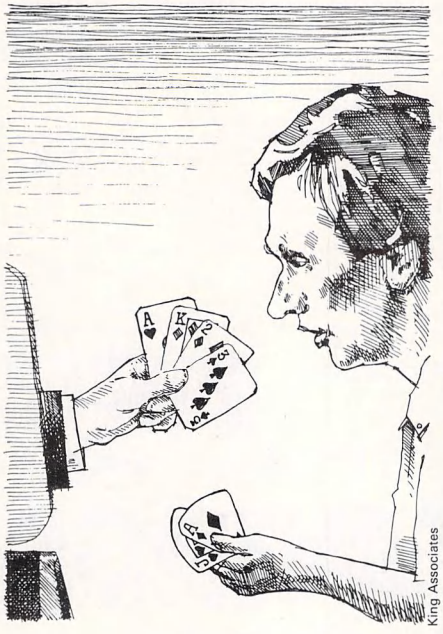
An example of one of these straightforward multiplayer games is Multi-Player *Blackjack*, located in the CompuServe Casino. Playing blackjack on CompuServe is similar to playing blackjack anywhere. You join with other users at a simulated blackjack table where cards are dealt and players place their bets using "credits" issued as you enter the casino. The rules for CompuServe's blackjack are the same as standard blackjack rules. You may join or leave a game anytime you like. You can even watch a game in progress without joining. And what's most fun, perhaps, is that you can type messages to the other players at your table as the game progresses.

On the other end of the gaming spectrum is a series of multiplayer games as complex and challenging as any you'll ever play. But those who play them say there are no better games anywhere.

These games were designed specifically for playing on an interactive multiuser computer network such as CompuServe and couldn't be played the same way in any other medium.

Two of the most popular are *MegaWars III* and *The Island of Kesmai*. You can play both of them as a single player against the computer, but those who play say the games are more exciting and rewarding if played with others in a "real-time" environment.

MegaWars III takes place in space, but it's far more than a "shoot 'em up" arcade-style computer game. This advanced simulation involves not only destroying enemies and capturing planets but building spaceships, establishing colonies on planets, building defenses, creating economic systems and ruling the people on the planets you colonize.



The Island of Kesmai is a complex piece of real estate that exists in the memory of the CompuServe computers. In this fantasy role-playing game, you direct your alter ego around the *Island* and through its mazes in search of riches while trying to avoid danger.

Most multiplayer games don't require you to complete a game in one session. As you leave a particular multiplayer gaming area, CompuServe remembers where you were, what you had accomplished and all the other important facts about the game in progress so that when you return you'll be at the same point.

CompuServe's multiplayer games offer online help, but there may not be enough with some games because of their complexity. That's why, before becoming frustrated with any of the multiplayer games, you should look for additional help beyond the online instructions. And lots of help is available.

You can order printed manuals for some of the multiplayer games—including *MegaWars III* and *The Island of Kesmai*—and you can do it online by typing GO ORDER at any prompt. But, even after you know all the rules, there's still the problem of where to find other souls online who are gaming enthusiasts.

The answer is the Multi-Player Games Forum. To get there, type GO MPGAMES. This forum is the gathering place for those seeking help in learning about the multiplayer games and those seeking others to accompany them on gaming adventures.

You'll find sections of the Multi-Player Games Forum devoted to support for CompuServe's multiplayer games. In the forum, you'll find online conferences where the basics of multiplayer games are taught by experts and where you can make friends with novices such as yourself who might be willing to become part of your gaming "team." You'll find a place to get specific questions answered in the message section. And in the forum's data libraries, you'll find scores of textfiles explaining the fine points of most of the multiplayer games.

As long as there is a need for social interaction and camaraderie, there will be a place for games. Computers have enhanced and even facilitated gaming, and CompuServe leads the way in providing its users with this unique form of multiplayer gaming experience.

David Peyton co-authored How to Get the Most Out of CompuServe *and* CompuServe for IBM PC Power Users. *His CompuServe User ID number is 76703,244.*

Read Online Columns

When you want to read opinions behind the latest computer and information industry news, turn to *Online Today Daily Edition's* Columns. You'll find insights, witticisms, user tips and more by leading computer journalists. To read any of the columns, type GO OLT-110 at any CompuServe Information Service prompt.

COLUMNS	OLT-110
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Behind the Screens	OLT-130
Calendar of Events	OLT-1000
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Online with Bowen	OLT-3500
Uploads Updates	OLT-3700

Beyond the Facts: McGraw-Hill News

by Kassie Rose

In these days of economic uncertainty and stock market volatility, business people and investors need immediate and accurate information. Professionals require concise, authoritative news that will help them make quick decisions.

Such a service is now available through CompuServe's Executive News Service and supplied by McGraw-Hill, one of the world's leading publishing and information service companies. *McGraw-Hill News* reports breaking business news in a timely, concise format and delivers thorough follow-up articles on major events.

Celebrating its 100th anniversary, McGraw-Hill publishes 88 business magazines and newsletters, including *BusinessWeek*, *Aviation Week*, *Byte*, *Data Communications* and many others. McGraw-Hill also provides financial data and economic forecasts from two subsidiaries, Standard and Poor's and Data Resources Inc.

Now the company has set up an electronic newsroom to produce *McGraw-Hill News*. Stories are filed by reporters in McGraw-Hill news bureaus worldwide. Drawing on the company's network of more than 800 specialist editors, economists and stock analysts, *McGraw-Hill News* editors write comprehensive follow-up reports.

"McGraw-Hill's ability to draw on so many expert industry observers is what makes us stand out in the electronic news business," says Anthony Durniak, general manager of McGraw-Hill News. It means that we can provide our customers with more in-depth contextual coverage than any other news service."

Three types of stories appear in *McGraw-Hill News*: the flash headline, the facts-only story and the more detailed analytical piece.

The flash headline is a one-line release designated by an asterisk and transmitted immediately after an event occurs. For example, economic indicators are first published as flash headlines. Minutes later, a facts-only story is sent, expanding upon the flash headline. On major items, editors tap McGraw-Hill's extensive industry-specific resources to develop longer analytical pieces that help explain to readers the significance of an event.

McGraw-Hill News covers a broad range of subjects, including company and industry news, the economy, US government news, regulatory decisions, stock market activity and foreign news as it affects daily operations of US publicly traded companies. Each morning, *McGraw-Hill News* features overseas market reports from Tokyo and London.

"The seeds of *McGraw-Hill News* were sown by customers of some of McGraw-Hill's industry-specific databases," says Julie Denny, manager of marketing and sales at *McGraw-Hill News*. "But it quickly became apparent to us that most business professionals are looking for general business news that helps them put industry-specific information in perspective."

To accommodate such needs, McGraw-Hill developed a database flexible enough for CompuServe subscribers to easily access *McGraw-Hill News* through the Executive News Service (GO ENS), which features an electronic clipping function. Subscribers can scan late-breaking news or create a selective profile that independently scans incoming news and saves stories that match each reader's clipboard profile. *McGraw-Hill News* on ENS (newswire code MH) carries a surcharge of $27.50 per connect hour.

The special needs of CompuServe's subscribers are further accommodated by *McGraw-Hill News*' design and format. Stories are concise, generally two to three screens in length. Headlines are informatively written so readers can quickly find significant stories by scanning the first few lines.

Whether you are monitoring the quarterly net income of IBM, concerned about British Prime Minister Thatcher's response to the declining dollar, or watching merger or acquisition candidates, you'll be able to get in-depth information from *McGraw-Hill News*. "Because users of online business services are our primary market, which is not the case with many other business newswires," says Denny, "CompuServe subscribers get our news immediately."

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Look into Other Investment Sources

by J. David Edwards

Investors who get price quotes from CompuServe believe that the available investment choices are limited to common stocks and corporate bonds. However, information is also available on stock options, warrants, convertibles, mutual funds, market indicators and commodities. Consider the following:

- Option pricing information can be obtained in the Options Profile program (GO OPRICE). An option is a right to buy or sell a security in the secondary market granted in exchange for an agreed upon sum. After receiving the ticker symbol of an underlying security, OPRICE displays calls, puts, strike prices and expiration dates available for that issue.
- Warrants and convertibles are issues that can be converted into another type of security from the issuing company. Warrants are options to buy a stated number of shares of common stock at a stipulated price. Convertibles are a feature attached to an instrument (typically bonds and preferred stock) that allow it to be converted (generally into shares of common stock) at a stipulated price. Using Current Quotes (GO QQUOTE) or Historical Pricing (GO PRICES), warrants and convertible debt can be priced online. If you are unsure whether a particular security is a warrant or contains a conversion feature, type GO EXAMINE to use CompuServe's Detailed Issue Examination program.
- Mutual funds are operated by investment companies that raise money from shareholders and invest it in various instruments. They offer the advantages of diversification and professional management. By consulting QQUOTE and PRICES, an investor can get current and historical pricing and reported net asset values. In addition, difficult-to-obtain mutual fund distribution information is available in the Dividends, Splits and Interest program (GO DIVIDENDS). Finally, the NoLoad Mutual Fund Association (GO NOLOAD) makes searching for and obtaining information on low and no-load funds easier.
- Market indicators are value- or capitalization-weighted indexes made up of underlying securities. Since their upward and downward price swings are representative of market-wide price movements, they are closely followed by individual investors and financial institutions. To locate and price market indicators, first type GO INDICATORS to find descriptions and ticker symbols for the indexes. Next, type GO QQUOTE or PRICES for current and historical pricing information.
- Commodity exchanges trade bulk goods, such as grains, metals, fuels and foods, on a spot (today) or futures basis. Even financial futures contracts are actively traded on these markets. By typing GO COMMOD, investors can access end-of-day and historical prices on all kinds of tangible and intangible commodities.

As you can see, the list of available alternatives is broad. And it doesn't end here. Foreign exchange rates, treasury instruments and more also are available. And this information can be displayed on your screen or captured in a file for transport to your personal computer, using any of a number of different interface programs. The key is that all the information is online, at your fingertips. To access these and other CompuServe pricing programs, type GO QUOTES at any prompt.

How to Adjust for Dividends

Discontinuities in historical stock prices occur when a stock split or stock dividend becomes effective, because large cash dividends or stock splits cause noticeable price changes not reflecting operational performance or marketplace events. They are the result of a financing decision, an offsetting transfer of wealth from the company to the stockholder.

To help users study the price fluctuations of an issue over time without the aberrations associated with dividends, CompuServe adjusts historical stock prices for cash and stock dividends, and for stock or reverse splits. Raw or unadjusted prices also can be retrieved, but the default price is value adjusted by CompuServe to save users the time and effort of adjusting prices on their own.

For the curious, the adjustment factors computed for distribution types are as follows:

- Cash dividend: AF = (PREV–AMOUNT)/PREV, where AF is the adjustment factor; PREV is the adjusted previous close (or bid/ask average); and AMOUNT is the amount in dollars of a cash distribution.
- Stock of another company or issue: AF = (PREV–RATIO x VALUE)/PREV, where RATIO is the number of new shares issued per share held; and VALUE is the previous day's value (closing or bid/ask average).
- Stock dividend: AF = 100/(100 + PCTG) = 1/RATE, where PCTG is the percentage of (held) stock being distributed, and RATE is the ratio of shares after the distribution to shares before the distribution.
- Stock split or reverse split: AF = B/A = 1/RATE, where B is the number of shares held before the distribution, and A is the number of shares held after the distribution.

These equations represent how pre-split prices are adjusted to reflect dividends. If you want unadjusted prices, run CompuServe's DATA program in the MQuote II area (GO MQUOTE). If you wish to see the actual dividends distributed by a company, type GO DIVIDENDS. Otherwise, simply type GO SECURITIES to peer into the past.

Business Briefs

New S&P Online Announced

S&P Online replaces CompuServe's previous Standard & Poor's General Information File and provides CompuServe subscribers with investment information on more than 4,700 companies.

In addition to frequently updated company statistics and earnings data, S&P Online provides information on items affecting a stock's price: dividends, stock splits, major corporate developments and earnings reports.

S&P Online users can access S&P's company earnings estimates and track industries by using S&P codes, action-oriented stock recommendations, investment ideas, and a terms-and-definitions section.

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You get the whole story—and more—from headlines to bottom lines. You get not only current news, but its *implications* for your business. Unlike any other news service *online*, McGraw-Hill News gives you in-depth follow-up stories on key events with commentary by industry specialists. Graphs and tables put statistical items in context. You get scope and depth you won't find anywhere else *online*.

And you get to the news you need fast, because it's easy to find. Using Compuserve's ENS clipping capability, you can sort McGraw-Hill News quickly and pinpoint what you need. That way you can make your business decisions—and take action—fast.

Above all, you get a news service that understands business news—and the needs of *online* users better. McGraw-Hill has long been a leader in business news, producing Business Week, Byte, Aviation Week, scores of industry specific products, and *online* services such as S & P Marketscope, DRI and Platt's Global Alert. Our business is getting business news to you. With service you won't find anywhere else.

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Back to Basics

Price/Earnings Ratio Indicates Market Conditions

by Mike Pietruk

For many, "Black Monday" (Oct. 19, 1987) meant a return to the basics of traditional stock market analysis.

"It's almost as if investors had forgotten about these basic tools in the speculative greed that gripped many during the first half of 1987," says Richard Wholey of Wayne Hummer and Co., a Chicago investment firm. One of these basic tools is the price/earnings ratio.

Simply stated, the price/earnings ratio may be computed by dividing the current price of a stock by its yearly earnings per share. There are numerous variations as to how earnings are actually determined. In general, the lower the calculated p/e ratio, the more desirable a stock is relative to other stocks, holding all other analytical criteria equal.

As the market roared upward, a few lonely voices offered warnings that stocks were fundamentally overvalued, thus resulting in overinflated price/earnings ratios. Among these were Growth Stock Outlook's Charles Allmon and Geraldine Weiss of Investment Quality Trends—whose financial models had many stock issues trading at double their intrinsic values.

Forbes magazine columnist Kenneth L. Fisher last August said the general market needed to decline 40 percent for stocks to be fairly valued. "Eventually, normalized values must be returned to as ultimately earnings, growth of those earnings, and dividend yields must compete with bonds and other investments. For the market to rise indefinitely, either phenomenal earnings growth or declining interest rates must occur. If neither can be sustained, the p/e ratio will ultimately be forced down to return things to equilibrium," Fisher said during an online conference in the Investors' Forum.

The aftermath of the collapse revealed something else quite interesting and unexpected. While the common belief is that all areas of the market collapsed, the reality is that certain sectors more than held their own. One such industry as noted by Weiss in her market letter was the electric and water utility companies. Says Wholey, "Due to the fact that they had real inherent value, you saw a lot of them hold up well with some, like Teco Energy (the old Tampa Electric) barely losing any ground."

Selecting potentially profitable stocks involves more than looking for companies with low p/e ratios. Says Thomas O'Hara, chairman of the National Association of Investors Corp., "I not only look at what the p/e is, but how it relates to other firms in that industry and to the market as a whole. Price/earnings ratios are an indication of the condition of the market and the state of the particular company."

Through much of 1987, many stocks traded at p/e multiples above the general market as represented by the S&P 500 index. A high ratio may indicate that analysts and investors anticipate that the firm will maintain or achieve fast future growth in earnings and sales. Often a company can support a high p/e because it has a competitive advantage in its industry due to size, name recognition or the quality of its products.

But how can individual investors put these principles to work for them? One way of doing this is the approach used by NAIC. The group's members attempt to predict future stock prices by using their proprietary Stock Selection Guide. To determine a company's attractiveness, both an expected high and worst case low price are forecast.

Bob Kalischer, NAIC member, briefly outlines this method. He says the high/low price calculations estimate the High price and the Low price that a stock will trade for over the next five years. The high price is usually calculated by multiplying the average (over the last five years) high p/e by an estimate of earnings per share five years from the current year. A similar calculation is done for the low price by taking the average low p/e and multiplying it by the current year's earnings. Other low price figures are calculated by using the average low price over the last five years, a maximum dividend yield and a recent severe market low.

While the NAIC pays a great deal of attention to price/earnings ratios, O'Hara is quick to point out that a p/e ratio is one of many tools available to investors and should never be used alone. "Whatever analysis you do," says O'Hara, "One must always add his or her own judgment at the end."

Mike Pietruk is a forum administrator of the Investors' Forum on CompuServe and an assistant vice president of Preferred Savings & Loan in Chicago. His CompuServe User ID number is 76703,4346.

Use Price/Earnings Ratios to Find Investment Values

by J. David Edwards

Suppose, for a moment, that you are at an office party and your boss asks you if you think that PepsiCo common stock, which closed earlier at $33.25 a share, is a good value for the price.

Determined to impress him by investigating the matter personally, later that night you access the CompuServe Information Service financial products area and determine that a price/earnings study should provide some quick clues concerning PepsiCo stock.

The price/earnings ratio is the current price of a stock divided by its earnings per share. The p/e ratio may either use the reported earnings from the latest year (called a trailing p/e) or employ an analyst's forecast of next year's earnings (called a forward p/e). Also known as the multiple, it gives you an idea of how much investors are paying for a particular company's earnings power. The higher the p/e, the more investors are paying, and therefore the more earnings they are expecting.

You determine that your first order of business is to compare the trailing p/e for PepsiCo to its historical range. By entering any of several MicroQuote programs, including TREND and EXAMINE, the trailing p/e is automatically provided. It is derived using the most recent closing price of the stock, divided by the latest reported earnings per share figure. For example, if the date is Dec. 21, 1987, the trailing p/e turns out to be 15.5.

To view the historic p/e range for PepsiCo, you then enter S&P Online and select 'History Part 1' to review it over the last four years. You notice that between 1983 and 1986 the p/e ratio has ranged between 20.4 and 7.0, with the highs in years '86 and '84 each being more than 20. Thus, your first conclusion is that PepsiCo isn't selling at a premium to its earnings.

It hasn't peaked.

Next, since no company (short of a utility) competes in a vacuum, trailing p/e ratios for firms are often compared to those of other companies in their industry. This is due to the reciprocal effects of competition on earnings.

By returning to S&P Online and entering the 'Company Directory' selection, a list of competitors can be produced. In addition to PepsiCo, we find that Coca Cola and General Cinema Corp. are also included in the Beverage (Soft Drinks) category.

Comparing the trailing p/e ratios for these firms against that of PepsiCo, EXAMINE shows us that Coca Cola's p/e of 14.46 and General Cinema's of 12.58 are both lower than PepsiCo's 15.5. From this information it appears that, for some reason, investors are willing to pay more for a dollar of PepsiCo earnings, at this time, than they are for those of its competitors. Perhaps one reason may be because they feel that PepsiCo's prospects for future earnings may be brighter?

To investigate this possibility, it is helpful to compare the forward p/e ratios between PepsiCo and its competition.

As you recall, the forward p/e ratio is obtained by dividing the analysts' expectations of future earnings into the current stock price. On CompuServe, I/B/E/S, the Institutional Brokers Estimate System, provides this information. By polling industry analysts at more than 125 brokerage institutions and research houses, average (or consensus) earnings expectations for the current and next fiscal periods can be obtained. They are then divided into the most recent closing price to generate the forward (or implied) p/e ratio.

According to the I/B/E/S Expanded Report, PepsiCo's earnings are expected to increase from $2.14 per share to $2.22 by the end of fiscal 1987 and to $2.59 by the end of fiscal 1988. Thus the forward (or implied) p/e ratios for PepsiCo are 14.41 for '87 and 12.36 for '88. Coca Cola and General Cinema Corp., on the other hand, are both expected to have decreased earnings per share for the current fiscal period, and only Coca Cola is expected to have an increase (although only by 1 cent per share) for fiscal 1988. Thus, these two firms exhibit higher forward p/e ratios. (Remember, lower earnings divided into current prices produce higher forward p/e ratios.)

Therefore, all things being equal, if PepsiCo's favorable earnings relative to that of its competitors actually occur, and PepsiCo stock marches back towards its 'premium' to earnings, then there is support for a belief that the stock may, in fact, rise in price.

Of course, many other events and circumstances could impact the future value of this stock. And a further analysis of additional information would be heartily recommended. But, for the purposes of investing in an issue, or just giving advice to the boss, a p/e analysis should prove to be a more profitable starting point than simply throwing darts at the morning journal.

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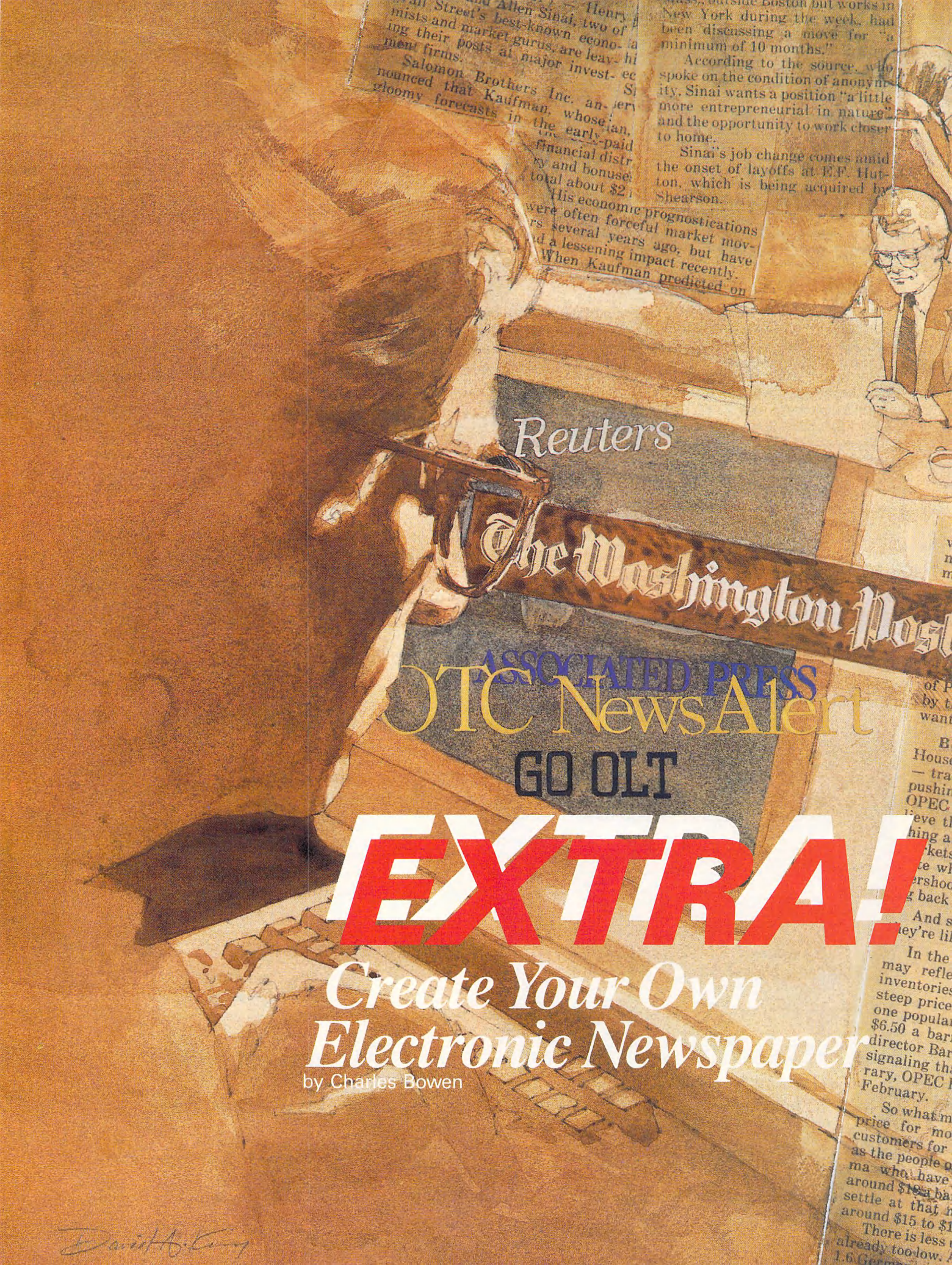
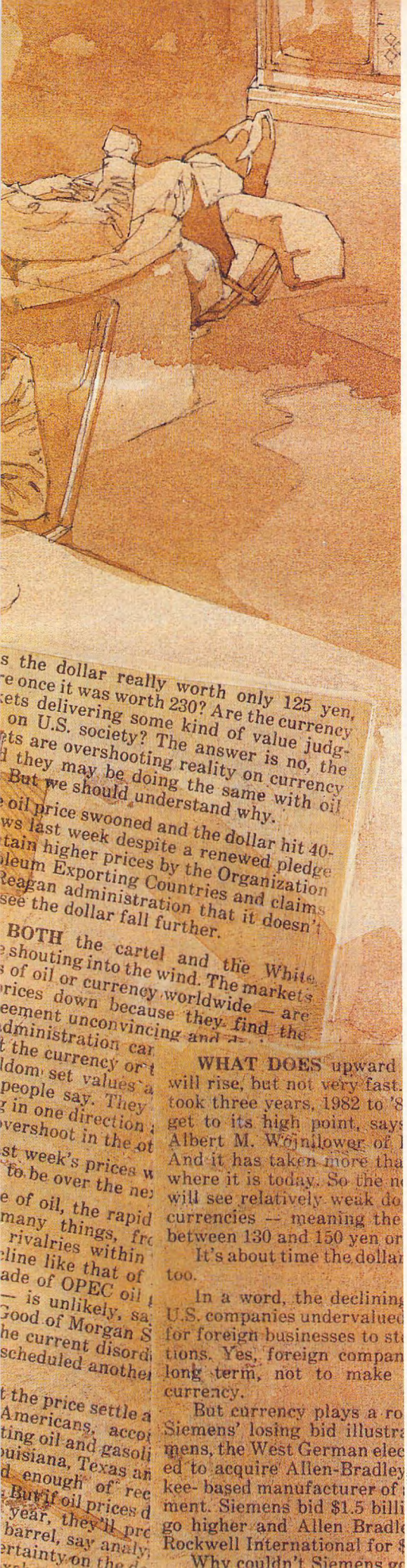


Create Your Own Electronic Newspaper

by Charles Bowen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NEWS/REFERENCE

Anyone old enough to read these words can remember the way it was before the current Information Age began.

While it's impossible to pinpoint a date when this new age of data actually started, any of us can list some of the new tools that uniquely characterize it, that make it different from times before —personal computers, online information services, all-news television and radio, hundreds of new specialized magazines and newsletters, the instant global communications afforded by satellites and fiber optics.

But besides its components, the Information Age is characterized by a new attitude. Most of us can recall a time even a decade ago when news still was consumed in daily packets—the morning paper with breakfast, the evening TV news with supper. To be well-informed and follow the day's news carefully was assigned to the same category as good citizenship. Staying atop current events was a good and rewarding endeavor if one had the time, but the actual minimum daily news requirements for most lives and businesses seemed quite low compared with today.

More than anything else, then, the Information Age's arrival has been characterized by our realization that a regular scanning of *Newsweek* or *Time* is no longer enough. As the late Canadian educator/author Marshall McLuhan predicted more than 20 years ago, we now live in a closer-knit and more complex world in which the activities of people we don't know and who may live a half a world away can affect our work, our happiness, our well-being.

Nowhere is the importance of a regular flow of news clearer than in today's business. Marketing Professor Roger Blackwell of Ohio State University made a strong statement about operating a business in a rapidly changing technical environment. He said that a 15-minute advantage over competition is probably all that can be expected these days, since news and information delivery is so fast. In other words, a company has little time after the announcement of a court decision or competitive product to make a counter move. The key is flexibility to direct resources and implement strategy to adapt to change.

And essential to that flexibility—whether for business or for our private lives—is being connected to quick, reliable news sources. CompuServe provides three different kinds of news resources that can be used in concert with one another for a more complete reading of the day's events, both on a global scale and in the corners of the world where we live and work. They are:

- News stories selected and edited by professional journalists. All our lives, we've counted on the news judgment of trained editors and reporters across the country to organize our newspapers. Today, journalists are at work online as well, preparing daily menus of the stories they think deserve our attention.
- A searchable database of news. A personal computer enables us to study accumulated news stories in ways traditional newspapers didn't dream of until a few years ago. By entering a keyword or two, we can search a backlog of stories to cull those of specific interest. This in effect turns a week's worth of random news into a tool for research.
- An automatic news clipping service. With this state-of-the-art feature in electronic news retrieval, we can direct CompuServe to work for us when we're not even online. Monitoring an assortment of news services, it can act as a personal editor, on watch for the kinds of news we specify, automatically saving copies of the stories until our next online visit.

To see how to use these three kinds of electronic news facilities together, let's imagine we work in the computer communications field, interested in news about all facets of the industry, from announcements of new machines to the performances of high-tech companies on the stock market.

Probably we would want to start with a visit to CompuServe's Executive News Service, where we pre-define keywords and phrases that reflect our news interests. Part of CompuServe's Executive Option, ENS lets us create "clipping folders" where stories on our topics of interest automatically will be saved for us. ENS scans The Associated Press, *Reuters Financial Report, McGraw-Hill News, The Washington Post* and OTC NewsAlert news wires around the clock. ENS carries a surcharge.

Using ENS, we might start by creating a folder called "Business" and have it monitor the wires of The Associated Press, *McGraw-Hill News, Reuters Financial Report, The Washington Post* and OTC NewsAlert. Up to seven keywords and key phrases can be in-

cluded in a folder, so in one folder we might direct ENS to be on the lookout for all stories mentioning "computers," "modems," "telecommunications" and so forth. Or the folder could be constructed in such a way to follow competitors' products and pricing announcements, new ventures, production levels, relevant court actions and more.

(An accompanying story gives specifics for creating and maintaining ENS folders.)

But probably work isn't our only joy in life. Suppose, too, that we're interested in politics in this national election year. ENS can help us follow the campaigns. A second electronic folder ("Elections") could be set up to watch for stories that mention names of favorite candidates and their opponents. Other keywords might include "voters," "election," "presidential" and "political." Or the folder could be given keywords to track such things as judicial appointments, House and Senate hearings, and debates.

Finally, we also might want to have ENS keep an eye out for other interests for our family, such as recreational activities and diversions. A third ENS folder ("Hobbies") could be created, containing keywords such as "Civil War," "chess," "gardening," "rock music" and "basketball."

Once folders are set up, ENS goes to work, monitoring each story as it is received from the wire services and copying to the appropriate folder any dispatch containing at least one of our keywords. Then when we're online, we can visit ENS to see what has been saved for us.

Using the Executive News Service this way enables us to drop large electronic nets to catch specific kinds of news. In other words, to use it we look into the future and tell CompuServe that stories mentioning specific words probably will be of interest to us.

But what if an important story could not have been anticipated in our keywords or developed before we were able to set up a clipping folder? For these occasions, there needs to be a way to look into the past as well as the future. A new CompuServe feature called NewsGrid, provided by Comtex Scientific Corp. of Stamford, Conn., allows us to electronically search a backlog of stories from a number of news agencies around the world.

After typing GO NEWSGRID, we are shown a menu that includes a keyword-search option, with which we can search for stories in a variety of fields, including national and international news, politics, business reports and features.

Suppose that on the political front, a new dark-horse candidate has caught our attention. We might use NewsGrid to search out recent news about the hopeful. If we decide he or she deserves our continued attention, we might return to ENS later and revise our "Elections" folder to include the new candidate's name among our keywords.

Moreover, NewsGrid offers some news resources not accessible to our ENS folders. NewsGrid's sources include United Press International and The Associated Press, for instance.

> "We can concentrate on specific kinds of news we're looking for. We don't have to wait for an editor or news director to deliver it to us."

And NewsGrid is particularly strong on business news and international news, offering material from Europe's Agence France Presse and Deutsche Presse-Agentur, and Japan's Kyodo News Service. NewsGrid is available at base connect rates.

The advantage to the two kinds of news retrieval we've seen so far—electronic clipping and keyword searching—is that we can concentrate on the specific kinds of news we're looking for. We don't have to wait for an editor or a broadcast news director to deliver it to us. However, that very aspect also is a concern to some observers, who point out that if we read solely the news we pick for ourselves, we're likely to develop a "tunnel vision" about the world around us. After all, the strong suit of a traditional newspaper page or a news broadcast is that we are exposed to all kinds of news, including stories we should know about even if we didn't expect them in advance. In fact, one definition of news is the unexpected, the very events that might slip through our electronic nets.

This makes important the third kind of online news retrieval—menu-driven reports prepared by professional journalists. The Executive News Service, in addition to its flexible clipping option, offers ways for us to view the most recent news of all types filed by its various sources. Similarly, NewsGrid, in addition to keyword searching, provides menus of stories selected by its editors as the day's top news in a number of fields.

Meanwhile, elsewhere on CompuServe are other professionally prepared reports. The Associated Press offers *AP Online* (GO APO), an assembly of top stories in a wide variety of subject areas. The edited stories are listed online along with headlines for a quick overview of world events. *AP Online* is like a newspaper, but you don't have to wait for tomorrow's edition to read today's stories.

Also there are specialized publications of interest. In our example, we imagined ourselves as a computer communications professional. As such, we probably would be interested in *Online Today Daily Edition* (GO OLT), which includes daily news from the computer industry in its "Monitor" section.

We also said we had an interest in music and entertainment. To expand on the material we catch in the ENS "Hobbies" folder, then, we might regularly visit RockNet (GO ROCK), which offers news of the music world, and Hollywood Hotline (GO HOLLYWOOD) for news from the entertainment capital.

Other specialized online publications (described in an accompanying article) cover business, public relations, press releases and more. Depending on your overall news needs, they often can broaden the field of information already coming to you through clipping folders and keyword searching.

There once was a time when the coming Information Age was viewed with alarm by those who would paint a picture of data bombardments overwhelming us. But the truth is that the same age of data also has meant an expansion of the tools with which we can manage that information.

Charles Bowen, a contributing editor of Online Today, *co-authored* How to Get the Most Out of CompuServe *and* CompuServe for IBM PC Power Users. *His CompuServe User ID number is 70007,411.*

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GO OLI or circle 8 on the Reader Service Form.

Quick Clips: ENS Monitors News Wires

In the early days, CompuServe seemed like a bright but forgetful child. It was capable of some remarkable feats for its age. Newshounds, for instance, could use it to reach the latest dispatches from The Associated Press and other news agencies for up-to-the-minute reports on politics, business, sports, entertainment and much more.

Like so many prodigies, though, the system seemed to lack a few basics that come with maturity. News patrons longed for the day when they could converse with this digital wonder on a new level, to say, in effect, "Hey! This is Charlie. Remember me? I *always* look for news of the Cincinnati Reds. I sure wish I didn't have to repeat myself every night ..."

That day arrived with the introduction of the Executive News Service. A feature of CompuServe's Executive Option, ENS enables you to file online a list of news interests that the system then can electronically consult each time you visit, a list that you can revise whenever you wish.

But ENS does much more than that—it can look after your interests even when you're not online. In the old days, the only way to get news from CompuServe was to log on, visit one of the news resources and pick from menus the stories that looked interesting. Such features still are available today and have their uses.

However, ENS does them one better. It can monitor an assortment of news services simultaneously, around-the-clock, even while you're asleep, alert to clip and save for you stories that mention one or more of the words or phrases you've listed.

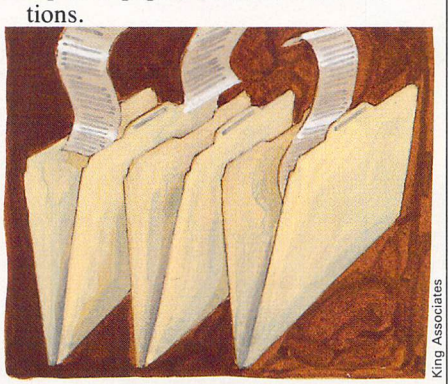
Today, ENS allows access to thousands of stories a day, from a half-dozen national and international news agencies.

ENS helps you manage the daily flow of information in three ways from this top menu:

```
******************************
Executive News Svc.
1 Introduction to the
  Executive News Service
2 Review Current News
3 Review Late Breaking News
4 Create/Change/Delete a Folder
Enter choice !
******************************
```

The first way is to review current news (Option 2). This enables you to examine stories filed in the past 24 hours. After you've selected this option, the system prompts you to identify the wire service you wish to view by typing one or more of these codes:

- APN for The Associated Press national news wires, including general, political, international, entertainment and domestic news from the wire service used by most of the nation's top newspapers and television stations.



King Associates

- APF to see AP's national financial news coverage of Wall Street, corporate news, the economy and more.
- APS for complete sports news from AP's outstanding sports staff.
- WP for *The Washington Post*, interesting insights and coverage of Washington financial, national and international news from one of the nation's top newspapers.
- RT for *Reuters Financial Report,* business news with emphasis on London, Tokyo and the US financial markets and corporations.
- OTC for OTC NewsAlert, a special news wire devoted to the companies traded on the over-the-counter stock market.
- MH for business and industry news researched by specialists within divisions of the McGraw-Hill publishing company, such as *BusinessWeek and Standard & Poor's*.

You can enter a single code, or more than one separated by commas, as in APF,MH,RT,OTC.

The system can list the located stories either by titles (headlines) or by leads (the first three lines of the story). From a subsequent menu, you can select the ones you want to read.

A second way to view the news from ENS is to review late breaking news, Option 3, which focuses only on news filed in the past hour or so. As with Option 2, this alternative prompts you to type the code or codes for the wires you wish to view.

ENS commands can be used to access the news more rapidly. For example, SCAN CURRENT APF,MH, RT would give you most of the business news filed in the past 24 hours. SCAN LATE APS would give you any sports scores of events completed in the last hour.

Both options are useful in tracking the day's events, but overwhelmingly the most popular feature of the Executive News Service is its clipping folder function. Setting up folders to monitor news as it comes in from ENS's various wires is as easy as selecting options from several menus, beginning with Option 4 ("Create/Change/Delete a Folder") on the main menu. This will cause the system to display this folder maintenance menu:

```
******************************
Executive News Svc.
1 Create a Clipping Folder
2 Change a Folder
3 Delete a Folder
4 List a Folder
Enter choice!
******************************
```

Choose Option 1, "Create a Clipping Folder," and the system prompts you for the folder's name—up to 10 characters, such as Elections. Now the system asks:

```
******************************
Folder Expiration Date
(MM/DD/YY) :
******************************
```

How long do you want the folder to exist? Enter the date in a format like this: 11/30/88. Then you're asked for "Number of days to retain clipped stories." If you plan to check ENS at least every three days, type 3 at the prompt.

Now ENS gets down to the most important part of the work: choosing the news resources and subjects to clip. It displays a menu like this:

```
******************************
Executive News Svc.
Folder ELECTIONS
Mode is INCLUDE
News Wires Selection
1 AP National
2 AP Financial Wires
3 AP Sports Wire
4 The Washington Post
5 OTC  NewsAlert
6 Reuters Financial Report
7 McGraw-Hill News
Enter choice or <CR> to continue !
******************************
```

Note that these are the same wires you can search directly with the codes. (This menu will change as new sources are added to ENS.)

You can select a single wire or more than one, separated by commas. For our Elections folder, we might select 1,4 to monitor the national AP wires and *The Washington Post*. For a business-oriented folder, we might select 2,5,6,7.

Now ENS seeks up to seven keywords or phrases, such as the candidates' names in our election folder. Also you can link keywords—such as PRESIDENTIAL + ELECTION—and use short phrases such as LEAGUE OF WOMEN VOTERS. An asterisk (*) is a wildcard, so VOT* would clip stories containing "vote," "votes," "voters," "voting" and so forth.

After you've chosen up to seven keywords or phrases, the system stores the folder and is ready to go to work. From now until the folder's expiration, ENS monitors the specified wires, setting aside stories containing at least one of your words or phrases.

You can create up to three folders, each with up to seven keywords or phrases, and the folder can be revised anytime you'd like.

To read the clipped news at any time, type GO ENS and choose one of the "Review Folder" options at the main menu. Notice Options 5 through 7 in this example:

```
****************************
Executive News Svc.
1 Introduction to the
  Executive News Service
2 Review Current News
3 Review Late Breaking News
4 Create/Change/Delete a Folder
5 Review folder ELECTIONS (6 stories)
6 Review folder BUSINESS (14 stories)
7 Review folder HOBBIES (0 stories)
Enter choice !
****************************
```

You can also use commands here to bypass the prompting sequence. For example, SCAN ELECTIONS would give you a menu of all story titles in the folder Elections.

A subsequent prompt will ask whether to list only the headlines of each story or to display the first few lines of each. When editing a folder, you will also be prompted whether to delete the stories in the folder. The command DELETE 1-5,7,9 would allow you to save some stories while cleaning unwanted stories from your folder.

To revise or delete a folder, choose the "Create/Change/Delete" option, and you'll have a chance to add and delete key phrases, and change news wires, expiration dates and retention days.

To get started with the Executive News Service, you first must sign up for the Executive Option, which gives you access to a number of additional value-added services for a $10 minimum monthly fee. (For details, type GO EXECUTIVE at any system prompt.) After you've become an Executive Option subscriber, you can use the Executive News Service by typing GO ENS at any prompt. ENS carries a surcharge of $15 an hour, pro-rated to the minute.

—CB

Get the Latest News on 1988 Candidates

by Denise Erwin

When candidate Gary Hart announced his re-entry into the 1988 presidential race, CompuServe posted a summary of his position on the issues in the Election '88 database within 24 hours. Election '88 (GO USA) offers subscribers an opportunity to closely follow the fast-changing status of national candidates and issues, and to take an active part in the election.

Election '88 offers a comprehensive package of databases, news services and discussion forums covering every angle of the presidential election year. It is designed to meet subscribers' needs for detailed information about the issues, campaigns and news highlights on key political races. "Election '88 was created to give subscribers an opportunity to participate in the election in a way that has never been done before, using the latest information technology," says Rich Baker, CompuServe editorial services manager. "This technology gives subscribers an opportunity to express their views on the issues and it ensures that information is the most current available. As candidates come and go, Election '88 will reflect these changes more quickly than other media."

Election '88 offers more immediacy to keep subscribers informed of developments and issues in American politics. It has consolidated many sources of election information including keyword search in *Grolier's Online Encyclopedia* and election news supplied by the Associated Press Datastream and *The Washington Post* Newsletter through the Executive News Service. Additional election information includes platforms summarizing each party and each candidate's position on the issues, each candidate's schedule, commentary, candidate profiles and Campaign Hotline (GO HOT), a single source of the latest campaign news.

The Campaign Hotline from the American Political Network provides a digest of each day's campaign news, campaign headquarters' reports, candidate schedules, national polls results, key senate race reports and insider commentaries. The Hotline has a $15 per hour surcharge and is available in Election '88. Leading pollsters and consultants from major parties are contributing Hotline analysts.

Election '88 features other new products to provide subscribers with complete coverage of the 1988 presidential campaigns and election.

Subscribers can also express opinions to the candidates by sending CANDIDATEgrams electronic mail directly to the candidates' headquarters.

"An upcoming feature is an opinion poll where questions will be posed for subscribers to voice opinions on current issues," Baker says. The results will be published online and will be one of the few places where subscribers can receive opinions instantly and track the changing moods of the voters.

Participating forums will also sponsor guest candidate representatives in regular online conferences for discussion of the candidates and issues. Election '88 features daily updates of information and daily exchanges of messages in the forums," Baker says. The service offers subscribers the element of immediacy and an opportunity to get involved in this presidential election.

Varied Sources Fill Daily News Pages

As powerful as the Executive News Service is, a confirmed news reader wouldn't want to limit his or her information gathering to ENS' electronic clipping folders.

Other resources around CompuServe provide keyword-searchable news and collections of stories assembled by professional editors and reporters. These services also can give you access to reports from news agencies not currently monitored by ENS.

Leading the list is NewsGrid (GO NEWSGRID), a feature that compiles dispatches from some of the world's largest wire services. It's operated by Comtex Scientific of Stamford, Conn.

NewsGrid offers an impressive array of news resources, including United Press International, The Associated Press, Agence France Presse (France), Deutsche Presse-Agentur (West Germany), Kyodo (Japan), Xinhua (Chinese News Agency), and, in the United States, PR Newswire, INTEX (Freight Futures), Garvin Guybutler (Federal Funds), Security Traders' Handbook and Panhandle Eastern Pipeline Corp.

Each news story that arrives in the NewsGrid service—about one every two minutes—is evaluated. Duplicate stories are weeded out and important stories are assigned five to 10 keywords that readers can use for searching the database of material. The keywords are assigned by editors so that searching is completed by topics rather than by keywords within the stories. After selecting the Keyword Search option from NewsGrid's top menu, you are prompted to enter a word on which to search. The system then informs you of the number of stories it has found matching your specification and offers to display the headlines in menu form.

Also available for searching are complete stories selected by editors in a number of categories, including US politics and business news, market reports, government news, and international reports and general stories ranging from medicine and science to theater and entertainment. These stories are available only through the Keyword Search Option.

Other options on the NewsGrid menu provide US and world news headlines, and US business and international business headlines. These headlines are dynamic so that as top news stories break, you will find them here. Another NewsGrid menu option is Market Update. This option leads to a submenu featuring stock market, bond market and economic indicators. People who need regularly-announced financial news releases will find them here.

NewsGrid makes more sources of financial news stories available to subscribers than was ever available before. NewsGrid is available at basic connect time rates.

Another searchable database of news is OTC NewsAlert, focusing on financial reports from the busy over-the-counter stock exchange. As noted in an accompanying article, OTC can be clipped through the Executive News Service, but for research, you may want to access the feature directly by typing GO OTCNEWS.

OTC, a surcharged feature of the Executive Option like ENS, is divided into two broad categories: recent OTC news (generally reports of the last few days) and historical reports (up to a year's backlog). Reports include major documents filed with the Securities and Exchange Commission, new issues of securities, new product introductions, major sales contracts and earnings reports.

King Associates

You can search the OTC database in a number of ways, such as by SEC filings, initial public offerings, stock symbols (tickers) and company names. Use of the database is surcharged at $15 an hour, prorated to one-minute increments, and specific instructions for searching are provided online from an option on the feature's main menu.

The Associated Press, in addition to providing reports for the Executive News Service, maintains a menu-driven feature called *AP Online* (GO APO), in which some of the top stories from the AP national wire have been collected by editors.

The menu categories include weather, national, Washington, world, political, entertainment, business, Wall Street, Dow Jones averages, features and history. In addition, an option called "Latest News" gives you capsulized summaries of the hour's top stories. *AP Online* is not surcharged.

The *Online Today Daily Edition* (GO OLT) offers daily material not found in the monthly print edition of the magazine.

Produced by the same group of freelance writers and editors who contribute to *Online Today*'s print edition, the daily edition, offered at basic connect-time rates, is divided into five areas: "Monitor," compiling a daily report of the top stories from the computer world, with a menu-driven backlog of seven days' worth of reports; CompuServe This Week, including "Community News" (what's happening around CompuServe) and a schedule of major forum conferences; Commentary and Departments, including "Behind the Screens," a compendium of hot tips and rumors from the computer world, and "Uploads," a list of some of the latest contributions to the data libraries of major online forums; and Product Reviews, including hardware, software, books and new product announcements.

The Business Wire (GO TBW) is a daily collection of press releases from around the nation. Some news stories appearing in the business sections of various wire reports and newspapers actually begin as statements from the companies involved.

Two final tips for news-hungry CompuServe subscribers: First, news is where you find it. That means it's not always on a menu or in a searchable database. CompuServe discussion forums often are invaluable resources for specialized news. Many of the nearly 100 forums online have subtopics of their message boards and data libraries reserved for news of interest to the forum's members. To locate forums and other services devoted to specific topics, use the FIND command at any CompuServe system prompt.

Second, the surcharged IQuest gateway service can connect you to a backlog of stories from scores of newspapers and wire services around the country, some full-text, some bibliographic citations. For information on using the service for news research, type GO IQUEST at any prompt.

—CB

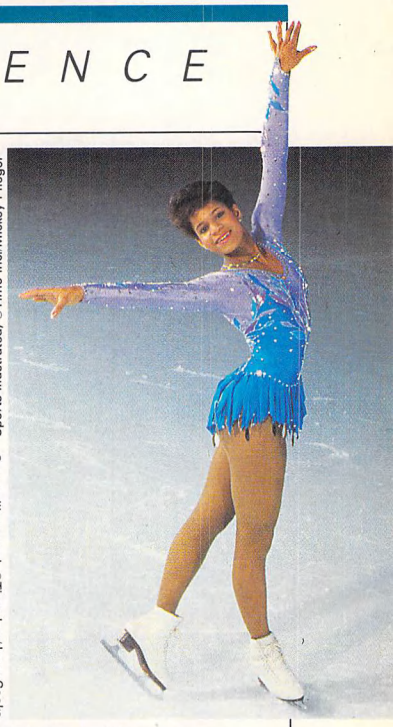
World champion: *Orser*

Sports Illustrated, ©Time Inc./Tony Tomsic

Making a reappearance: *Boitano*

Sports Illustrated, ©Time Inc./Richard Madson

Going for the gold: *Witt*



Sports Illustrated, ©Time Inc./Mickey Pfleger

Sports Illustrated, ©Time Inc./Jerry Cooke

US titleholder: *Thomas*

Follow the Olympics

by Camille Ohlson

If you're interested in following the 1988 Winter Olympics but not able to make the trip to Calgary, you can still keep up with the athletes—from the preliminary activities to the close finishes.

A special Olympics menu (GO OLYMPICS) is available to help you to become more involved with the Olympics.

Selections on the history of the Olympics will be provided by the United States Olympic Committee. You will be able to follow the story of the Olympics from the Grecian games to Baron Pierre de Coubertin's proposal to revive a modern Olympics to the 1984 Los Angeles Summer Games and beyond.

Statistics for previous Olympic events are also available. You can look up original records and track the achievements of recent athletes as they set new records.

The USOC will provide a schedule of daily events by both date and sport, so you can find out exactly when your favorite event is scheduled. In addition, the USOC will post a section about people to watch—mainly athletes from the United States but also including unusual or unknown competitors.

In men's figure skating, Canadian Brian Orser is reigning world champion and has to be considered the man to beat, especially with a hometown crowd to cheer him on. Californian Brian Boitano, the 1986 world champion, is expected to unveil his long-awaited quadruple toe loop in his effort to beat Orser for the gold medal. Alexander Fadeev, 1985 world titleholder from the Soviet Union, will be next in line should Orser or Boitano falter.

In women's figure skating, 1987 World Champion and 1984 gold medal winner Katarina Witt of East Germany hopes to be the first individual figure skater in almost 30 years to repeat as Olympic champion. American Debi Thomas, 1986 world titleholder, is expected to be Witt's major competition. Canadian Elizabeth Manley and American Jill Trenary will also be in the quest for medal honors.

In pairs skating, two-time world champions Ekaterina Gordeeva and Sergei Grinkov of the Soviet Union are favored while Peter Oppegard and Jill Watson of the United States are hoping to improve upon the bronze medal they captured at the 1987 world championships.

In ski racing, Canadian fans have high hopes for their team, led by honorary captain Michael J. Fox. No, Fox hasn't quit acting for skiing; as honorary captain, he is helping his country's team with its fund-raising campaign.

Favorites in the Alpine events are all from Europe. Swiss stars Pirmin Zurbriggen and Peter Mueller lead the powerful Swiss team. Marc Girardelli of Luxembourg is another European to watch as he and Zurbriggen continue their battle for skiing supremacy.

The US team—winner of five medals at the 1984 Sarajevo Olympics—has been decimated by retirement and injury. Medal winners Phil and Steve Mahre and Christin Cooper all retired from competition following the 1984 games. Gold medal winners Bill Johnson and Debbie Armstrong have both been hit by injuries and have yet to regain their 1984 form. US hopes for an Alpine medal were further battered on November 9, 1987 when Tamara McKinny—America's best hope for a medal—suffered a fracture in her left leg during training. The hairline fracture prevented her from training on the slopes for about six weeks.

For Olympic enthusiasts who want to show their team spirit, the USOC offers an Olympics store through The Electronic Mall.® A wide range of products, such as United States Olympics shirts, warm-up suits, travel bags, pins and mugs, will be available, according to Kathy Menck, retail sales manager for the USOC at the Olympic Training Center in Colorado Springs, Colo. Prices range from $1 for some of the pins to $75 for the warm-up suits.

For results from the events or stories on the athletes, two separate Associated Press news wires will carry the stories from Calgary. A special Olympics news wire will operate alongside the AP Datastream service within the Executive News Service for the duration of the games. Executive Option subscribers will be able to use the Executive News Service to set up electronic clipping folders to capture stories containing specific keywords.

To keep up with the 1988 Olympics, type GO OLYMPICS at any prompt.

Camille Ohlson, a free-lance writer based in San Diego, is a former member of the United States Ski Team. Her CompuServe User ID number is 70007,3340.

Macintosh Users Move Quickly with Navigator

Navigating the CompuServe Information Service is easier than ever for Macintosh users now that the CompuServe Navigator communications software program has been enhanced and made available.

The product was enhanced to take advantage of CompuServe commands and menu structures. By adapting CompuServe to the familiar Macintosh idiom with "pull-down" menus and dialog boxes, CompuServe Navigator increases speed and ease of use, especially in the forums and EasyPlex. With CompuServe Navigator, a Macintosh user can write a script to conduct a complete online session before going online. A typical script might include having the program dial up CompuServe, access one or more forums, retrieve selected messages, scan data libraries by subject, send EasyPlex messages and log off CompuServe.

"Since all of your thinking and reading is done offline, online charges are kept to a minimum," says Sharon Baker, CompuServe's product manager of the Micronetworked Apple Users Group. "The only online costs that are incurred are for the minutes CompuServe Navigator is actually online retrieving data. And CompuServe Navigator can access CompuServe and retrieve data much faster than a user could doing the same tasks manually."

Another program feature is Multifinder, allowing word processing or other programs to be used at the same time the CompuServe Navigator program is running.

Developed by Michael O'Connor, CompuServe Navigator is an enhanced version of a software product that was first introduced to CompuServe users as shareware in August 1987. The enhanced program is now being marketed with documentation and customer service support to CompuServe subscribers.

The new version features terminal mode capacity and file transfers with CompuServe's enhanced B protocol. CompuServe Navigator also supports the online display and direct transfer of graphic images created using CompuServe's Graphics Interchange Format.

CompuServe Navigator is available only by ordering through the CompuServe Information Service (GO ORDER) at a cost of $59.95. Subscribers who have the first version of Navigator will be contacted by CompuServe and offered the new version for a $20 upgrade fee.

Equipment required for using CompuServe Navigator is an Apple Macintosh (512, Plus, SE or Mac II models); an 800K disk drive and 512K memory; and System 3.0 or higher. A Hayes-compatible modem is suggested.

Support for CompuServe Navigator will be supplied through the Macintosh Personal Productivity Forum on CompuServe (GO MACPRO) or through CompuServe's Customer Service Department.

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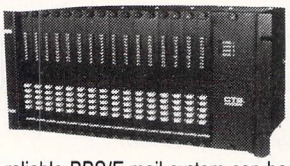

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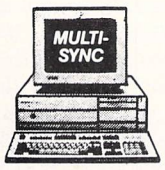

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GO OLI or circle 21 on the Reader Service Form.

Crosstalk Forum Answers Questions

DCA/Crosstalk Communications has opened a forum for users of its communications products, including the popular Crosstalk communications packages (Crosstalk XVI and Mk. 4) and the DCA IRMA and SmartAlec cards for the IBM PC and compatibles.

"The forum was started to provide another avenue of support for users," says Sheldon Hall, one of the Crosstalk Forum's administrators. He and Maria Forrest, the other administrator, are employees of DCA/Crosstalk Communications.

The forum provides an ideal way to support products, as it is necessary to answer a question only once and everyone will see it, Sheldon adds.

There are eight subtopics: Forum Use Questions, Transporter, Remote, Crosstalk Mk. 4, Crosstalk XVI, Crosstalk for CP/M, DCA Irma and DCA SmartAlec. Each subtopic has an associated data library in which forum members will find utility programs and information files.

Crosstalk Mk. 4 is DCA's newest and most advanced asynchronous communications software product with facilities such as a script language to automate your communications. It is expected that there will be a healthy exchange of script language files under the Mk. 4 subtopic. Plus, self-installing updates and patches to Mk. 4 will be provided in the data libraries.

DCA Irma and SmartAlec are IBM PC add-in cards that make it possible for an IBM PC to act as a terminal to a mainframe computer system. The products will be fully supported in the Crosstalk Forum. To access the forum, type GO XTALK at any prompt.

Unix Forum Now Open for Business

Until recently, CompuServe subscribers interested in information on and programs for the Unix operating system had to drop in on at least five different forums (TANGENT, Microsoft, VAX Forum, *Dr. Dobb's* Forum and PDP11 Forum). Now the Unix Forum meets the needs of all Unix users and programmers.

Unix is a multi-tasking, multi-user operating system originally designed for minicomputers and mainframes. Over the last few years, it has gained popularity, with versions appearing for the more powerful personal computers.

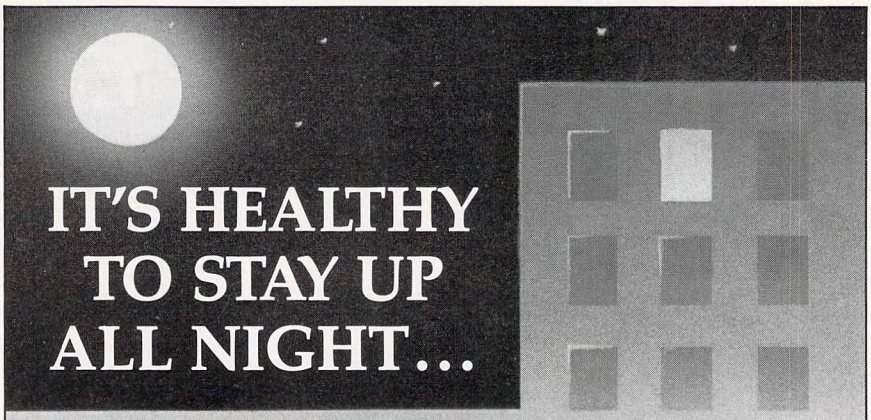
One advantage of Unix programs is that the majority are portable between systems running Unix, making most programs in the Unix Forum's data libraries compatible with all members' systems.

The Unix Forum administrators are George Jones and Karl Kleinpaste. Jones is not new to running a forum, having started the Amiga Forum.

The Unix Forum has 11 subtopics, covering such areas as Unix Basics; Tools; Communications; Minix & Friends (a microcomputer-based Unix look- and workalike); System V: the current AT&T implementation of Unix; and Berkeley, a version of Unix with lots of "bells and whistles."

Initial reaction to the Unix Forum has been positive, according to Jones, speaking after the forum's first week online.

If you are a Unix user or interested in the operating system, type GO UNIXFORUM at any prompt.



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Forum Redesign Project in Process

As a result of subscribers' suggestions on how online forums could be made easier to use, CompuServe's forum software is being revamped between now and April. Key features of the revised forum software will be intuitive commands and menus.

To collect input from subscribers, CompuServe held focus group meetings in Columbus, Chicago, Boston and other cities. Initially, the subscribers were asked for their feedback on the existing forum software. Then, input was sought from CompuServe associates and from people who had never used an online information service. Finally, CompuServe's forum administrators had a hand in the process. Since December, they have been testing revisions to the forum product.

"The current commands are not necessarily associated with the functions they perform. The new version of commands and menus will be more intuitive," says Donna Black, CompuServe forum specialist. For example, subscribers will be able to type READ if they wish to read a message and READ FORWARD to read a series of messages from oldest to newest.

Other changes will make the forum commands more consistent with other areas of the CompuServe Information Service. For example, the design of forum menus will be similar to that of menus throughout the Information Service. Navigation within each forum will be similar to that of the rest of the service, with commands such as "M" and "B" supported in the forums. Global option commands can be set up in a subscriber's DEFAULT (PROFILE) area for the online forum editor, data transfer protocol and graphics support.

The new version also will allow subscribers to set the first menu they want to see when accessing a forum, thus making access faster. The function menu will remain as the default first-level menu but users will be able to change it to suit their needs. For example, one subscriber may prefer to go directly to the message menu and another may want to see the data library menu first—in both cases, users will be able to bypass the function menu.

The new function menu will look like this:

Forum Function Menu
1 INSTRUCTIONS
2 MESSAGES
3 LIBRARIES (Files)
4 CONFERENCING (0 participating)
5 ANNOUNCEMENTS from sysop
6 MEMBER directory
7 OPTIONS for this forum
Enter choice!

The most noticeable changes will occur in the message area. The message board will be enhanced to make individual messages easier to locate and read. For example, all messages will be displayed in "subject order," meaning that the reader will automatically go from one message subject to its replies rather than on to another subject. The end result is that a user can read the messages in a logical, conversational order rather than reading bits and pieces of message subjects all at once.

Another enhancement planned for the message area is "customized message reading." From the message menu, a subscriber will be able to choose an option called "SELECT (Read by section and subject)." That option leads to a menu listing the forum's section names and the number of subjects and number of messages within each section. By viewing this menu, a user can decide which section to read. Once in that section, there will be a listing of all of the message subjects and the number of replies for each. "You can quickly find the topics that interest you and the amount of activity within a particular message subject," says Black. "You can select the numbers of the subjects you're interested in (separated by commas) from the menu."

In the data libraries, the commands will be modified to be more intuitive thus speeding up processing time.

The conference area is also being redesigned. The conference menu will have three options: 1 ENTER room, 2 CALENDAR, and 3 DESCRIPTION. The first option will allow forum members to access any of the conference rooms. The next option will serve as a pull-up calendar of scheduled conferences for that forum. The description option will list the purpose of each conference room. Bulletin capabilities will still be available.

For more information about the upcoming forum software changes, watch for announcements in What's New (GO NEW). Even after the new version is available, old commands will still be supported.

New Files Designed for Fun, Productivity

The data libraries in CompuServe's forums are filled with thousands of programs and textfiles. The following are a few of the files uploaded recently to the data libraries. For a more up-to-date list of uploads, check the "Uploads" columns in *Online Today Daily Edition* by typing GO OLT-3700 at any CompuServe Information Service prompt. New columns are added twice monthly.

AIE FORUM
(GO AIE)

Typology — An archived textfile on expert system typology. File TYPOLG.ARC in Data Library 5.

Language Conference — Transcript of a conference with Texas Instruments' PC Scheme language developers. File CONF.TXT in Data Library 13.

AMIGA FORUM
(GO AMIGA)

Code Help — A Morse code trainer. Great for Ham radio and SWLs. File MX in Data Library 4.

Terminal Program — Access, a full-featured 16-color shareware terminal program for the Amiga. File ACCESS.ARC in Data Library 4.

ATARI 8-BIT FORUM
(GO ATARI8)

Ram Checker — A BASIC program to create MEMTES.COM, RAM-checker program for the Atari that will check up to 576K on a 130XE and will check both the NEWELL and RAMBOXL memory upgrades. File MEMTES.BAS in Data Library 3.

COMMODORE MUSIC, GRAPHICS AND GAMES FORUM
(GO CBMART)

Robbing the Rich — *Robber*, a game in which you are the robber in a diamond store. File ROBBER.BIN in Data Library 9.

Spider — The classic solitaire game, which uses two decks of cards. File SPIDER.BIN in Data Library 11.

COCO FORUM
(GO COCO)

Money Matters — Money Manager, a program for the CoCos, handles money managing needs. Shows monthly, yearly, line item and monthly usage reports. File MONEY.MAN in Data Library 8.

GOOD EARTH FORUM
(GO GOODEARTH)

Gardening Aid — Gardener's Assistant, a shareware program for IBM PCs and compatibles. The user types in the names of vegetables to be planted in the garden, the size of the garden, its location, family size and other important data. Program tells how much to plant, where to plant it in the garden and when to plant it. File GASSIS.ARC in Data Library 2.

IBM NEW USERS FORUM
(GO IBMNEW)

Adventures — New text adventures for IBM PCs and compatibles, including a crime adventure (CRIME.ARC), a haunted mission adventure (HAUNT.ARC), an island mystery adventure (ISLAND.ARC), and an ice cavern adventure (TERROR.ARC), all in Data Library 3.

IBM SOFTWARE FORUM
(GO IBMSW)

Desktop Publishing — Citydesk, Desktop Publishing Program version 3.0 now enables 40-, 60- or 80-character columns and 66, 88 and 110 lines per page in a two-column format. Up to seven fonts with certain printers. A shareware release. File CTDESK.ARC in Data Library 2.

Outliner — PC-Outline, a nine-windowed, optionally memory-resident outline processor by Brown Bag Software. Shareware. File PCO330.ARC in Data Library 2.

INVESTORS' FORUM
(GO INVFORUM)

Portfolio Help — A new version of PFROI, the popular shareware portfolio manager by Robert Hobbs from TechServe. More than 500 downloads of previous versions. File PFROI8.ARC in Data Library 1.

ONLINE TODAY FORUM
(GO OLTFORUM)

Program Screens — Data Library 6 of this forum is devoted to files which, when downloaded, provide illustrations of screens you'll see in the software reviews in both the print and daily editions of *Online Today*. The files are stored in CompuServe's GIF format. Uploaded graphics files to Data Library 6 include screens from the Salinon Headliner and XyWrite III Plus. To see the files that display the screens from Salinon Headliner, type BRO HLNR at the DL 6 prompt. To see the files that display the XyWrite III Plus screens, type BRO XYWR at the DL 6 prompt.

SCIENCE FICTION/FANTASY FORUM
(GO SCIFI)

New Generation Episodes — A list of episode titles for the new *Star Trek: The Next Generation*. File REMAKE.TXT in Data Library 2.

Trek Trivia — A *Star Trek* trivia game for IBM PCs and compatibles. Includes questions on episodes, movies and literature. File TRIVIA.ARC in Data Library 2.

TRS-80 MODEL 100 FORUM
(GO M100SIG)

Pressure Check — A program to record blood pressure and pulse readings for a permanent health record. File BLOOD.PRS in Data Library 4.

HP Calculator — Hewlett-Packard calculator emulator for the Model 100/102, offered as shareware. File HPCALC.100 in Data Library 4.

Contest Results — Results of the 1987 Summer Programming contest listing the votes, results and declared winners in each category. File RESULT.LST in Data Library 14.

WORDPERFECT SUPPORT FORUM
(GO WPSG)

Special utility — WordPerfect Cross Referencing Utility for WordPerfect 4.1 and 4.2. Shareware program runs as an external program and can cross-reference paragraph numbers, pages and notes. Results are written in WP format to an output file. File WPXREF.ARC in Data Library 1.

David Peyton co-authored How to Get the Most Out of CompuServe *and* Advanced CompuServe for IBM PC Power Users. *His CompuServe User ID number is 76703,244.*

Read CompuServe News

Online Today Daily Edition covers the online community. Whether it's a forum conference announcement, a special promotion or a new product introduction, you can read all about it in the *Daily Edition*. To access news about the CompuServe Community, type GO OLT-50 at any CompuServe Information Service prompt.

***COMPUSERVE THIS WEEK**	**OLT-50**
About Update	**OLT-60**
Community News	**OLT-80**
Conference Schedules	**OLT-120**
Letters to Editor	**OLT-30**
Online Inquiry	**OLT-1**
Online Today Guide	**OLT-351**
Previous Weeks' What's News	**OLT-270**
Shopper's Guide	**OLI-70**
Uploads Updates	**OLT-3700**
What's New	**OLT-70**

Cornucopia of cruises: *Carnival created the "fun ship" concept*

Cruise to Exotic Ports of Call

by Sandra Gurvis

Cruises are becoming a popular form of travel, and with good reason. Where else do you have all your meals prepaid (no reservations!) and only unpack once yet visit three or more exotic ports in a few days? Not to mention bountiful on-board attractions, such as pools, exercise facilities, bars, movies, gambling and live entertainment.

Recently my husband and I took a one-week cruise aboard the Holiday, owned by Carnival Cruise Lines, one of the largest cruise lines in the world.

Using the innovative concept of "fun ships," Carnival revolutionized the industry in the mid-1970s by eliminating class distinctions that segregated passengers for meals and activities. Carnival also turned a cruise into a recreational experience with a cornucopia of options, although you can still do the traditional things, such as lounging on your deck chair or playing cards or shuffleboard.

Of the Carnival fleet's seven ships, three are ultramodern "superliners," built during the past two years. Three others are in various stages of construction, to be finished between 1989 and 1991.

The Holiday is one of the superliners. To say that it weighs 46,052 tons, has a passenger capacity of 1,800 and a crew of 660, and that it has three pools, a half-dozen bars and lounges, a beauty parlor and barber shop, a complete gym and sauna, duty-free shopping and a casino scarcely does it justice.

My first thought upon boarding this shining white colossus was, how on earth am I going to find my way around? Then I discovered that each deck is color- and letter-coded with a map of the entire ship near its eight elevators.

My second thought was: What am I going to do for seven days? At our cabin, we found a daily newsletter crammed with upcoming activities. Foremost on the agenda was a mandatory emergency drill required by maritime law. After locating our life preservers and finding our "muster stations," we returned to the room to unpack.

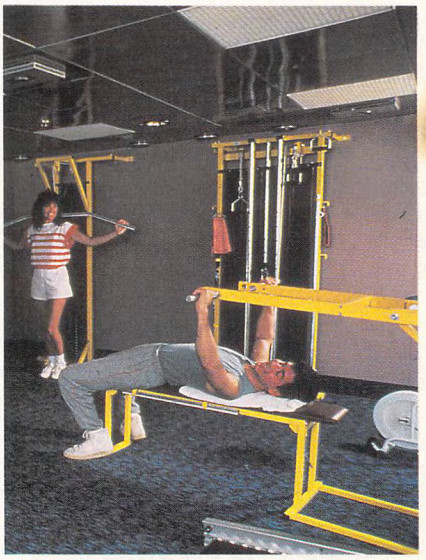
Although cabin class ranking is passé, the higher up your cabin is in the ship, the more it will cost. However, with the exception of the veranda suites, the cabins are universally small. Of the four decks, we were next to the top, with twin beds that could be converted to a king-size bed. The lower decks offer only upper and lower bunks.

One tip: Although some in our group who had been on cruises said a porthole was unnecessary, we regretted not having one. The large, square window offers an unparalled view of the sea at dawn and gives a sense of its presence at all times. It seems worth the small added expense.

The first day was spent exploring the ship's offerings. My husband discovered the casino and tested his skill at blackjack, craps and roulette. Except for bingo (and they had that, too, in one of the lounges), I rarely gambled, preferring to take my money to the duty-free shops, where offerings included clothes, jewelry, makeup, perfume and liquor. Items were competitively priced, as we learned during our three conveniently interspersed ports of call.

I developed a routine for the other four days at sea. Mornings I'd work out at the health club or take an aerobics class on deck—exercising becomes even more invigorating as you gaze into the endless horizon and breathe the sea air. Then it was time to lounge in the sun.

My friend and I preferred sunning ourselves on the quieter aft deck, away from the pools and refreshment areas where a livelier crowd congregated. The gracious waiters still found us though, and brought us our usual Diet Cokes, which we could either charge to our accounts or pay for with cash. Non-

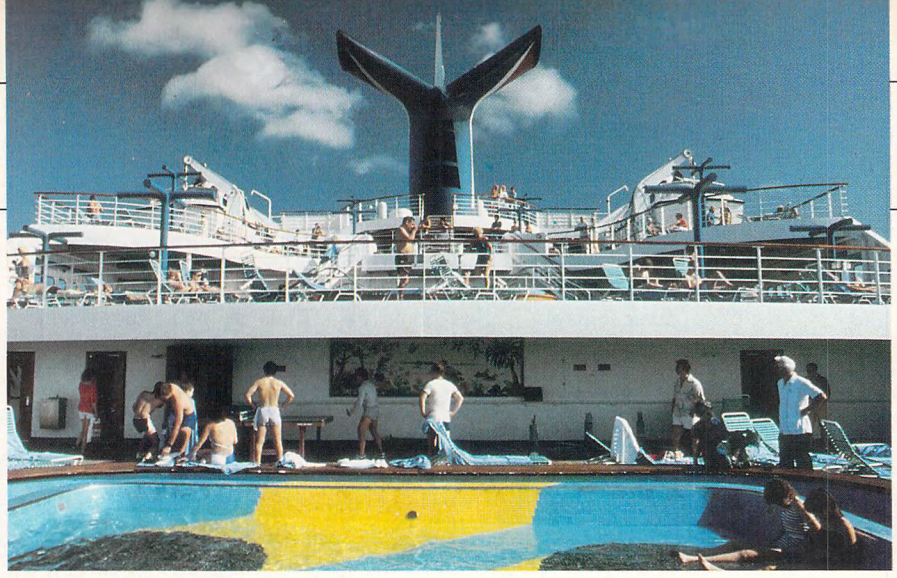


Working out: *Shipboard exercise*

meal and alcoholic beverages are not included in the initial cost.

Afternoons were spent pursuing various activities: dance or card lessons, even golfing and skeet shooting. There were also informative lectures about upcoming ports of call. In the cabin we could take in a first-run movie on our built-in television (standard in all rooms). Attire was casual, both on-board and ashore. Although you could wear whatever you wanted at other meals, dinner required dressier clothes. Formal outfits (dark suits, fancy dresses) are needed only twice, for the captain's party and at the farewell dinner.

The staff willingly accommodated children, organizing daily and special activities such as pizza parties and scavenger hunts. Kids have a playroom, with baby-sitting available for a small charge. As with most cruise lines, Carnival offers a reduced rate for chil-



All afloat: *Taking in the sun poolside*

dren under 17. School-age children would have a great time, but parents might get harried chasing a toddler around the ship.

Much more than the standard three square meals are offered. You can enjoy breakfast in bed, and an on-deck kitchen serves additional meals: breakfast for early risers, a midmorning snack and an afternoon tea. There are also huge midnight buffets in the dining rooms and even a mini buffet at 1:30 a.m.

Passengers can choose from early or late meal sittings. Families might prefer the earlier sitting with its conventional meal times of 8 a.m., noon and 6 p.m.

The later sittings begin about an hour and a half after the others. Here, I encountered the only aspect of the cruise I disliked: eating every meal at the same table with the same people. However, as my husband pointed out, this allows the waiters and bus people to know the passengers better and therefore anticipate their needs.

The food was varied and delicious, with nearly every taste represented. Each night there was a different theme and cuisine: French, Italian, American and so on.

After dinner, we'd proceed to the evening's entertainment. It might be a Las Vegas-style review, a noted magical act, or something silly, such as a "cutest legs" contest talent show. Often we'd simply stroll along the deck and enjoy the evening sea.

A variety of bars and lounges awaited those who preferred more social pastimes; while some had loud music, others were simply quiet places to talk. I meant to spend a few hours reading in the library but never got around to it. There were sailing jaunts to other parts of the Caribbean, the Bahamas and the Mexican Riviera. Three- and four-day cruises provide passengers with an economical taste of the Bahamas.

Most cruise lines will tell you what to expect at each port. They'll warn you against suspicious vendors and give you a list of recommended shops, sights and tours.

Still, straying from the beaten path has its rewards, as we learned in Jamaica. Rather than opting for a "package" to the botanical exotica of Shaw Park Gardens and a "jitney" (open buggy) ride of Prospect Plantation, we toured the exquisite rain forest, shops and the cooling pools of Dunn's River Falls. We sampled spicy jerk chicken and chewed on real sugar cane along with other delicacies. We also toured Grand Cayman.

Our last ports of call were in Mexico. We had two brief hours at Playa Del Carmen. There were more stores with fantastic bargains on silver, straw items and blankets. The shopkeepers expect you to dicker, so be prepared.

Then we docked at Cozumel, called "Land of Swallows" by the Mayans. The area offers a wide range of activities: diving sites, beaches, shopping and a few ruins.

We visited the Mayan ruins of El Cedral. The ruins were interesting, and the wild, bumpy ride provided a behind-the-scenes glimpse of how some Mexicans live. We ended our trip with dinner at a restaurant recommended by a crew member. We returned to Miami—many lines leave from and return to Miami, San Juan, Seattle, or Los Angeles—and flew home, back to reality, a few days later. (It is sometimes less expensive to make your own arrangements to and from the ship instead of having the cruise line do it for you.)

The cruise was a bargain, both monetarily and spiritually. We intend to do it again. And again.

Sandra Gurvis is a free-lance writer based in Pickerington, Ohio. Her CompuServe User ID number is 70007,2302.

Find a Cruise Line

CompuServe subscribers can obtain information from The Cruise Shop in Sun 'N Sand Vacations (GO SNS) featuring the Norwegian Caribbean Line. You can also make online arrangements. In addition to cruises, the Norwegian Caribbean Line has eight and 10-day optional trips to the Bahamas or the Caribbean. Prices range from $325 for a three-day, off-season trip to the Bahamas to $2,750 for a 10-day excursion to eight Caribbean ports.

Subscribers using the Norwegian Caribbean Line may qualify for free airfare and transportation to and from the ship for one-week cruises and reduced rates for shorter ones. GO SNS for details.

You can opt for other cruise lines through Sun 'N Sand and your local American Express travel office.

©Allen Malschio

Serene superliner at sea: *The ultimate vacation vehicle*

If you're interested in a smaller cruise to Alaska, for example, take a look at Lee Foster's description of Alaska's southeastern towns in West Coast Travel (GO WESTCOAST).

Take an Online Tour of Travel Services

By making travel arrangements through your personal computer and CompuServe, you can custom-design travel plans, save money and turn an ordinary trip into an extraordinary experience.

You can research air fares and schedules and make reservations from your terminal, and locate and reserve hotel accommodations, Bed and Breakfast inns, vacation condominiums or country inns. Reserve a rental car or obtain a routing map. Book a cruise or vacation package to worldwide destinations and obtain detailed information before leaving. With CompuServe you can also access online forums to communicate with fellow travelers, tourism professionals and natives of your destination—why not make a friend online before you arrive?

When you type GO TRAVEL, you'll see the main Travel menu. For an overview of online travel offerings, stop off at "What's New in Travel" and choose the "Guided Tour" option from the menu:

1 Introduction
2 Air Information/Reservations
3 Hotel Information
4 Car Information
5 Tours and Cruises
6 US Domestic Information
7 International Information
8 Travel Potpourri
9 Travel Forums

Through the Guided Tour, you can get more information about any of the service areas listed on the main Travel menu. For example, from the "Air Information/Reservations" option on the Guided Tour, you can find out more about the Official Airline Guide Electronic Edition, Travelshopper and Eaasy Sabre—online services providing airline information and reservations.

The "Hotel Information" option on the Guided Tour leads you to descriptive information on the ABC Worldwide Hotel Guide—a listing of more than 30,000 hotels and motels worldwide—hotel reservation capabilities in the Official Airline Guide Electronic Edition and other services offering accommodations. For example, hotel reservations for specific vacation packages are available through Sun 'N Sand Vacations. The Worldwide Property Guide lists real estate and holiday facilities for rent, purchase, charter or sale.

Car rental reservations, described under the "Car Information/Routings" option on the Guided Tour, are available through Travelshopper, Discover Orlando and Sun 'N Sand Vacations. You may also order routing services through Travelvision, the company that creates Exxon road maps. Travelvision also offers auto tape tours to enhance your knowledge of specific destinations.

For more information about vacation packages, select the "Tours and Cruises" option. CompuServe offers tour services with trips to Florida, the Caribbean, Mexico, Europe or the South Pacific. You may reserve a specific package, custom-design your own package or simply gather information. Sun 'N Sand, American Express ADVANCE, Discover Orlando, Rocky Mountain Connections and Hawaiian Concierge offer tour packages. By using the feedback sections of these services, you can request brochures or additional information about the destination.

The "US Domestic Information" option on the Guided Tour takes you to a summary of travel services useful for planning a vacation within the United States. Various services offer specialized information about regions, details on festivals and entertainment, and even dining suggestions. For example, West Coast Travel, a consumer travel guide written by a professional travel writer, offers detailed descriptions of 100 Western destinations. Hawaiian Concierge provides comprehensive information on tourism—and vacation packages—for the Hawaiian Islands.

International travel services are described under the "International Information" section of the Guided Tour. Visa Advisors can help you in obtaining visas and passports for international travel. The Department of State Advisory maintains continuously-updated emergency service information for US citizens traveling abroad. You can read about international destinations through online travel articles in Adventures in Travel. Worldwide accommodations—in addition to hotels—are listed in the Worldwide Property Guide.

Before leaving for your vacation destination, visit the Travel Forum, also described on the Guided Tour. Here you'll meet experienced travelers and travel professionals who can provide additional tips.

Online Travel Services

Here's a list of GO commands to reach CompuServe's travel databases and forums. Bon voyage!

ABC Worldwide Hotels	GO ABC
Adventures in Travel	GO AIT
American Express ADVANCE	GO AXP
Department of State	GO STATE
Discover Orlando	GO ORLANDO
Eaasy Sabre	GO EAASYSABRE
Florida Forum	GO FLORIDA
Official Airline Guide Electronic Edition	GO OAG
Rocky Mountain Connections	GO ROCKIES
Sun 'N Sand Vacations	GO SNS
The Hawaiian Concierge	GO HAWAII
Travel Forum	GO TRAVSIG
Travelvision	GO TRV
Travelshopper	GO PARS
Visa Advisors	GO VISA
West Coast Travel	GO WESTCOAST
What's New in Travel	GO WNT

New PRODUCTS

New Demographic Report Available

The Neighborhood Sports/Leisure Activities Report is now available for any ZIP code in the United States.

This report provides information about residents' preferred sports and leisure activities, such as swimming, sewing, renting video tapes, going to the theater, and playing basketball or backgammon.

Neighborhood Reports provide information to satisfy curiosity or identify business opportunities. Each report carries a $10 surcharge. GO DEMOGRAPHICS

YGI! Offers Free Connect Prizes

The Creative CompuCasting Co. announces free connect-time prizes ($10, $30 and $50 values) to *YGI!* winners.

The *YGI!* gifts of time are for future CompuServe usage and are available in the Bonus Bunker, where *YGI!* players redeem game points. GO YGI

Adobe Forum Now Available

The Adobe Forum, sponsored and administered by Adobe Systems Inc., is available on the CompuServe Information Service.

The new forum features news, information and support for Adobe Illustrator and Adobe Type Library, and technical support for PostScript programming. Screen fonts and utilities also are available for downloading. GO ADOBE

CompuServe Command Enhanced

Subscribers now can type a list or range of menu selections at the "Enter Choice!" prompt in most areas of CompuServe, excluding the forums.

For example, subscribers may view a list of the text for all menu items displayed by typing ALL at the "Enter Choice!" prompt unless the selection leads to another menu. Typing 1,3-6,9 at this prompt will list choices 1,3,4,5,6 and 9. This command works the same with the (S)croll command. GO COMMAND

Chip Barthelmas

Hawaiian Concierge Available

CompuServe announces The Hawaiian Concierge, a new online travel service and collection of Hawaiian vacations and activities.

Whether you are planning a family vacation or company convention, The Hawaiian Concierge includes information about travel, accommodations, tours, water sports, concerts, cultural events, special registries and unusual adventures. GO HAWAII

Ashton-Tate Support Expands

Ashton-Tate now supports its most recent products, Byline and dBase Mac, in the Ashton-Tate Forum.

Byline is an easy-to-use desktop publishing product specializing in reporting dBase data for the IBM PC. DBase Mac, Ashton-Tate's first product for the Macintosh, is a powerful relational database system. Members of the dBase Mac development team will participate in the forum's message threads for a few weeks.

The Ashton-Tate Forum offers a complete range of support services, including technical support, customer service, referrals, corporate press releases and training schedules. GO ASHFORUM

New Weather Briefing Available

The new CompuServe Aviation Weather Briefing provides aviation weather reports and forecasts for a flight between two airports along the route of a pilot's choosing.

A simplified interactive technique allows airports to be easily specified by city name, airport name or a three-letter identifier. Routes are specified using FAA terminology and all information is verified using long names prior to the briefing.

The briefing provides a large scope of weather reports and forecasts, and a pilot can select the categories of reports.

The surcharge, four-tenths of one cent per nautical mile, is applied only when the weather data is received. There is a minimum charge of 25 cents, but no maximum charge. GO BRIEFING

Valentine Ideas at The Mall

Elizabeth Barrett Browning first penned the words "How do I love thee? Let me count the ways." This Valentine's Day, The Electronic Mall® offers 101 ways to say "I Love You" with a special Valentine gift guide.

Browse the guide's listings in "Hearts and Flowers," "Seductive Suggestions" and "Cupid's Choice." Traditional offerings, such as a dozen long-stemmed roses, diamond earrings, and Godiva chocolates, are featured as are out-of-the-ordinary presents, including six-foot love banners and kaleidoscopes.

There is something for husbands, wives, old lovers, future lovers, grandparents, secretaries and good friends—furry and otherwise. All 101 ideas await you when you GO MALL. Here is a sample:

- A set of candy tins filled with red hots and conversation hearts from Pepperidge Farms
- The Ginny Valentine doll from The Doll Place
- A framed Jim Dine "heart" poster from The Metropolitan Museum of Art
- A week in Monte Carlo from Air France
- Red silk bikini underwear—for her and for him—from Inside * Outside Lingerie
- A moire and lace teddy bear from Lincoln Manor Baskets
- A Byzantine heart locket from The Metropolitan Museum of Art
- *Love* by Leo Buscaglia from Ballantine Books
- His and her bathrobes from American Express
- FTD Love Note Bouquet from Walter Knoll Florist
- Diamond earrings from Milkins Jewelers
- A six-foot "I Love You" banner from BannerGram
- A cozy weekend for two in Ireland from Ameropa Travel
- Dr. Ruth's *Game of Good Sex* from Software Discounters of America
- A down comforter from American Express

Gift of Time

Online Today offers subscribers the chance to win 10 hours of standard service connect time (a $60 value) by writing a 200-word essay on how they use CompuServe's Information Service.

The essay should be typed, double-spaced and sent to *Online Today,* CompuServe Incorporated, 5000 Arlington Centre Blvd., P.O. Box 20212, Columbus, OH 43220, or sent via EasyPlex to 70003,3246. Please include your full name, address and User ID number.

The winning essay will be published in *Online Today.*

Chip Barthelmas

Keeping Up-to-date Online

My work requires being up-to-date on national security issues. The electronic clipping folders in the Executive News Service have helped meet this need.

Keywords identify news of interest, and a few times a week, I check the folders in about five minutes. This coupled with reading helps me to be as up-to-the-minute as possible. I send stories of particular interest to my files by electronic mail.

I also use CompuServe in other ways when I need to save time. For example, the aviation weather service is an effective aid in flight planning, particularly with the government's reduced flight services.

Uldis Adamsons
Springfield, Va.

Ask Customer Service

Q: What should I do if I encounter an error message while using CompuServe?

A: Copy the error message and report it to Customer Service at 800/848-8990 or 614/457-8650 (inside Ohio or outside the United States), or send a Feedback message (GO FEEDBACK) containing as much information as possible about the problem and when you encountered it. Remember, you are not charged for connect time while using the Feedback area.

Q: Whenever I try to log onto the system, I enter my User ID number and get the message, "? The first character of a UIC must be alphabetic." How can I avoid this?

A: Unless you are typing CIS or COMPUSERVE at the Host Name prompt, you will be asked for UIC, which is not the same as your User ID number. You can avoid this by using CIS or COMPUSERVE at the Host Name prompt or by entering a [CONTROL-C] after you receive a connect message. Your first prompt will then be for your User ID number.

Q: Sometimes, when I enter my password, I get a message that says, "?? LOGINE—Invalid Entry—try again."

A: This error message indicates that you are either using an incorrect password or mistyping it. To verify that you are typing the password correctly, try typing it where you can see the characters. One common mistake is neglecting to press the Shift key when entering a shifted symbol, such as an asterisk (*).

Q: How can I find out if the error message is coming from CompuServe or from my software?

A: The format of the error message will distinguish a CompuServe error message. CompuServe error messages begin with a ? or a % followed by a six-letter code, such as LOGINE. The Customer Service Department is knowledgeable about these error messages and can provide explanations.

Q: What does it mean when I log onto CompuServe and get a message that says my "home structure" is unavailable?

A: When you receive a message saying "Home Structure Not Available," either routine maintenance or system problems are taking place and the "home" mainframe computer assigned to your account is down. You can log onto a secondary structure, but your EasyPlex messages and files within your Personal File Area would be temporarily unavailable. Normally, this interruption lasts only a short time. Try logging on later to see if your home structure is back up and running.

Q: What is happening when the system says, "One Moment Please ..."?

A: This indicates that you are switching from one mainframe to another.

Q: When I am in a forum, I sometimes get the message "Files Busy, code 5-10." What does this mean?

A: The message "Files busy, code nnn" indicates that the area you are trying to access is temporarily full. Try disconnecting your modem and logging onto the service a few minutes later.

Q: What has happened when I get the message "Enter CONTROL-Q to continue"?

A: An error message that begins with "%NTW" indicates a temporary technical problem routing your computer's signal across telephone lines to CompuServe. Whenever possible, CompuServe's Network Services will reconnect you and send the prompt "Enter CONTROL-Q to continue." If, after a few minutes, you do not receive this prompt, you need to hang up your phone and redial later. Unless you resume your session by entering a [CONTROL-Q], your charges stop accruing at the moment you received the message beginning "% NTW."

Q: Do you give advance warning of a system being brought down?

A: From 15 to 60 minutes before a CompuServe computer goes down for scheduled maintenance, you will receive the message "System going down in XX minutes." The message will appear with increasing frequency until the system is no longer available and all sessions are terminated.

—Carol Evans and Amy Pampuch

These answers and more are available in Customer Service's Question & Answer Database. You can find answers to questions about billing, logging on, using forums, sending EasyPlex messages, using the Personal File area, setting up a Personal Menu and more. Type GO QUESTIONS at any prompt on the CompuServe Information Service.

Laser 128EX:j

An Apple II Compatible Computer

Central Point Software
9700 S.W. Capitol Hwy., #100
Portland, OR 97219
503/244-5782

Computer: Laser 128EX (Apple II compatible).
Operating System: AppleDOS 3.3 or ProDOS.
Features: Standard configuration features 128K of RAM with one standard Apple disk drive, a parallel port, a modem port, a mouse port, one expansion slot, switch selectable 40/80 column text capability, 90-character keyboard (including numeric keypad), built-in speaker with volume control and earphone jack; 90-day warranty.
Options: Second external disk drive ($150 for 5.25-inch or $225 for 3.5-inch); joystick ($25); mouse ($79); Laser 128 Expansion Box with two card slots ($50); modem and printer cables ($25 each); carrying case ($65); monochrome monitor ($125); printer.
Model Tested: Standard Laser 128EX connected to Apple III monitor and Epson FX-85 printer.
Base Price: $499 for single-drive system, which includes all ports but no monitor.

Reviewed by Brian D. Monahan

The Laser 128EX claims to be an Apple IIc compatible computer. Actually, the Laser 128EX behaves like an enhanced Apple IIe with an extended 80-column text card, and it includes all the built-in input/output features of the IIc. All the ports most users will need are already there for serial and parallel printers, a modem and a mouse. Consequently, the Laser 128EX is extremely easy to set up, no matter what your configuration. Five minutes after the box is opened, the computer can be running.

Booting up the machine brings you to the familiar square bracket and leaves you in Microsoft BASIC. This is the same version of BASIC found in Applesoft. Although this ensures compatibility, you won't find additional features of other versions of Microsoft BASIC, such as the "print using" statement.

Undoubtedly, users will purchase this machine to run Apple software, and I tried a variety of it. Although no computer can be 100 percent compatible, all software tested ran without problems. The programs included the Apple System Master, ProDOS, AppleWorks, LogoWriter, Scholastic's Microzine and Graphics Magician. Documentation for the Laser 128EX includes a list of hundreds of programs that run successfully.

Incidentally, the Laser 128EX includes a complimentary copy of Central Point Software's Copy II (Apple version). In turn, that includes several useful copying and file-management utilities.

Although the Laser's case is sealed, the computer does have one Apple-compatible external expansion slot on the left side. While Apple cards can be connected here, the slot also can be used for a Laser 128 Expansion Box. Connecting that box provides two shielded Apple-compatible card slots.

The Laser offers one attractive option not available on the Apple: An IBM-compatible video display may be connected by purchasing a $25 cable.

The Laser 128EX comes with 128K of RAM, which is more than enough memory for most Apple applications. It is, however, expandable to 1MB. Dealer installation is recommended for the additional memory, but detailed instructions are provided for those who wish to install it themselves.

An attractive 150-page manual covers the use and setup of the computer and the selection and installation of peripherals. Explanations are presented clearly in step-by-step fashion, and illustrations are used where necessary.

The manual also includes an extensive section, nearly half the book, on programming in BASIC. While that material is accurate, the same information is available in many other places. As more and more users purchase computers to run databases and spreadsheets, I wonder why manufacturers continue to insist on teaching BASIC simply because it is built into the machine.

The Laser 128EX keyboard uses regular-sized keys and has several nice features, including well-placed Arrow keys, several programmable Function keys and a numeric key pad. However, I have the same problem with this keyboard that I've had with several generations of Apple keyboards. It simply does not "feel" professional. I think this is because the keys are too close together. And it doesn't help that the angle of the keyboard isn't adjustable. It would have been gratifying if the Laser had not copied the Apple in these respects.

On the whole, the Laser 128EX is an excellent computer. It seems to be an especially appropriate choice for Apple computer-equipped schools that wish to expand their facilities. It also seems an appropriate choice for parents who wish to give their children computers compatible with the computers used in school.

The Laser 128EX may be ordered directly from Central Point Software or from any of hundreds of dealers across the nation. Many of those dealers currently advertise the computer at a substantial discount, making it even more attractive.

Brian D. Monahan is an associate professor and coordinator of graduate programs in the computer science department at Iona College, New Rochelle, N.Y. He also is deputy mayor of Dobbs Ferry, N.Y. Monahan's areas of interest are educational computing and the use of computers in government. His CompuServe User ID number is 70007,3000.

Trademarks: Apple, Apple IIc, AppleWorks, Applesoft, ProDOS (Apple Computer Inc.); Epson (Epson America Inc.); Graphics Magician (Penguin Software); Microzine (Scholastic Inc.); LogoWriter (LCSI); Microsoft (Microsoft Corp.).

GO OLI or circle 20 on the Reader Service Form.

Go Online for More Hardware Reviews

The following hardware reviews are available this month on *Online Today Daily Edition* by typing GO OLT-220 at any CompuServe Information Service prompt.

Commodore 128D
Low-End Computer
Manufacturer: *Commodore Business Machines Inc.*
Computer: *Commodore 128.*

Proteus 286GT
High-Speed Computer
Manufacturer: *Proteus Technology*
Computer: *Proteus 286GT (IBM PC-AT compatible).*

Want to Read More Hardware Reviews?

GO OLT-220 from any prompt in the CompuServe Information Service and choose this month's reviews from the main menu.

ONLINE TODAY

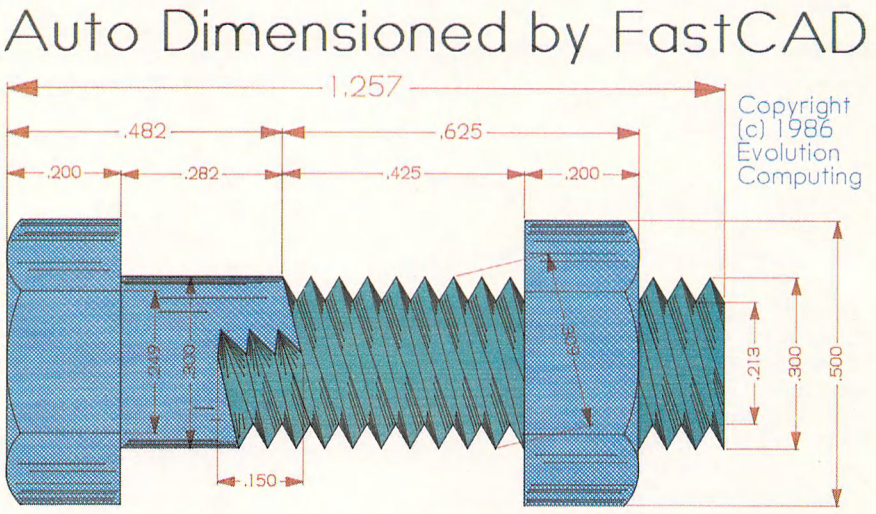
FastCAD 1.10

Provides Accelerated and Windowed Design Functions

Evolution Computing
437 S. 48th St., #106
Tempe, AZ 85281
602/967-8633

Computers: IBM PC, PC-XT, PC-AT, PS/2 and other 8086, 8088, 80286 and 80386 compatibles.
Operating Systems: PC-DOS or MS-DOS version 2.0 or higher.
Media: Requires two double-sided diskette drives or a diskette drive and a hard disk.
Copy Protection: None.
Required Peripherals: Color or monochrome graphics-capable video adapter and monitor (supports IBM CGA, EGA, PGA and PS/2; Matrox; Tecmar; Vectrix; Hercules; Pixelworks, Sigma Designs; Tseng Labs; Video-7; VMI and other adapters).
Other Requirements: Minimum 512K RAM and 8087, 80287 or 80387 math coprocessor.
Optional Items: Graphics input device (supports numerous mice and digitizers); plotter (supports numerous brands and models); Bell & Howell film recorder; graphics-capable printer (supports numerous dot-matrix and laser printers).
Systems used for test: (1) 640K Compaq Deskpro with two diskette drives, 20MB IOMEGA Bernoulli Box, 2MB Maynard Accent Card; 8087 math coprocessor, NEC MultiSync monitor and Video-7 VEGA Deluxe video adapter; running Compaq MS-DOS 3.10. (2) 1,024K Proteus 286GT with two diskette drives, 20MB hard disk, dual 15MB Sysgen DuraPak cartridge drives, 2.5MB STB Systems Grande Byte extended memory card, 10MHz 80287 math coprocessor, Amdek Color 722 RGB monitor and STB Systems EGA Plus video adapter; running IBM PC-DOS 3.10 at 6 and 12MHz. (3) Epson FX-85 printer and Hewlett-Packard 7475A Graphics Plotter used with both computers.
List Price: $2,295

Reviewed by Ernest E. Mau



Accelerated auto-dimensional drawing: *FastCAD plots*

FastCAD (version 1.10) is a two-dimensional computer-aided drafting package for the high-end market. It is a speed demon! Drawing, zooming and redrawing zip along with little waiting even on an 8086 computer running at a Norton index of 1.7. On 80286 computers at Norton indices up to 11.7, it really sails. It is the fastest CAD package I've seen for IBM-compatible personal computers.

However, FastCAD won't load without a math coprocessor, and the coprocessor must keep pace with the computer speed. I have problems with the program losing track of some functions and messing up things such as zoom windows on a 12MHz 80286 computer where FastCAD seems to overrun a 10MHz coprocessor. Yet it operates flawlessly with that computer set to 6MHz.

High speed lets FastCAD use multiple drawing windows efficiently. Unlike other CAD programs, the screen can display up to four windows, each sized by the user. Each window can zoom independently, so one might show an overall view while three others show fine details in different areas. Anything done to any window shows immediately in all windows overlapping the affected area.

While windowing is an exciting and useful feature, it is limited to one drawing and cannot accommodate multiple drawings. Nor can windows physically overlap; they must occupy discrete portions of the screen. Furthermore, a selected window cannot be enlarged to fill the screen without first deleting other windows. FastCAD would be more effective if it could overlap windows and switch between multiple and single windows at a keystroke.

FastCAD has the expected assortment of drawing functions, including points, lines, boxes and splines (smooth curves) plus five methods for drawing circles and three for arcs. It draws regular polygons with three to 126 sides, irregular polygons and smooth polygons. The latter can draw ellipses within designated frames. Other drawing tools include arrows, double arrows and tangent lines. A special "path" command draws a routed connection between two endpoints through up to 126 nodes. Filled or unfilled "wide lines" turn and trim corners neatly, while filleting and chamfering functions round and bevel corners between regular lines.

Various positioning "modifiers" zero in on defined reference points, midpoints, endpoints, intersections, circle centers, fixed angles, directional bearings and so on. Parallel, perpendicular and tangent lines are easy to construct. Editing functions move, copy, scale, rotate, mirror, break, bend, trim, stretch and otherwise manipulate drawing elements. Measuring and automatic "associative" dimensioning work in English or metric units. FastCAD handles up to 15 colors, 256 drawing layers and 16 line styles, and it provides a means of easily modifying or redesigning any line style.

Item selection for editing or copying is intriguing because FastCAD can select by window, layer, type, color or other parameters linked by Boolean "and," "or" and "not" conditions. For example, the program can be directed to change all items in color 2 or color 8 inside a window on layer 3 that are not text. Such outstanding flexibility enables precise selections.

The object filling function still needs work. At present, only 21 or 65 available patterns are defined, and a promised facility for designing your own patterns hasn't been implemented yet.

The user cannot control the spacing or angle of patterns, so zooming into a filled area can give some strange results as the filling remains at a fixed size. Also, plotted fills often look different from onscreen displays.

Filling only works on boxes, polygons, regular polygons and wide lines, not on circles or smooth polygons. Unlike some programs, FastCAD cannot yet trace and combine selected lines into fillable polygons. However, filling is "associative," so changes to the area (color or line style) automatically change the fill, and stretching a filled object causes the fill to expand or contract to the new area.

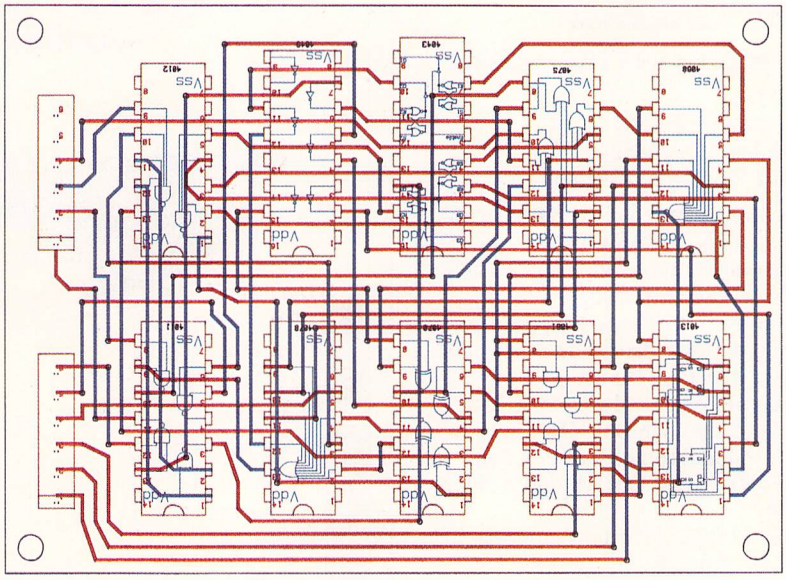
The plotter facility is quick and uses pen optimization, plotting all of one color before the next. It also has settings for paper or transparency speeds. Depending on the installation setup, FastCAD can pause or not pause for pen or turret changes, providing either unattended plotting or maximum use of color.

Nice touches include the abilities to save, recall and plot specific views, load and use special menus, write and use macros, save and recall drawings as template patterns and make drawings into parts for insertion into other drawings. Other nifty features include paging drawings to disk when they're too large for memory, polygon and spline editing, using multiple-page menus, forcing designated objects to be drawn in front of other objects and much more.

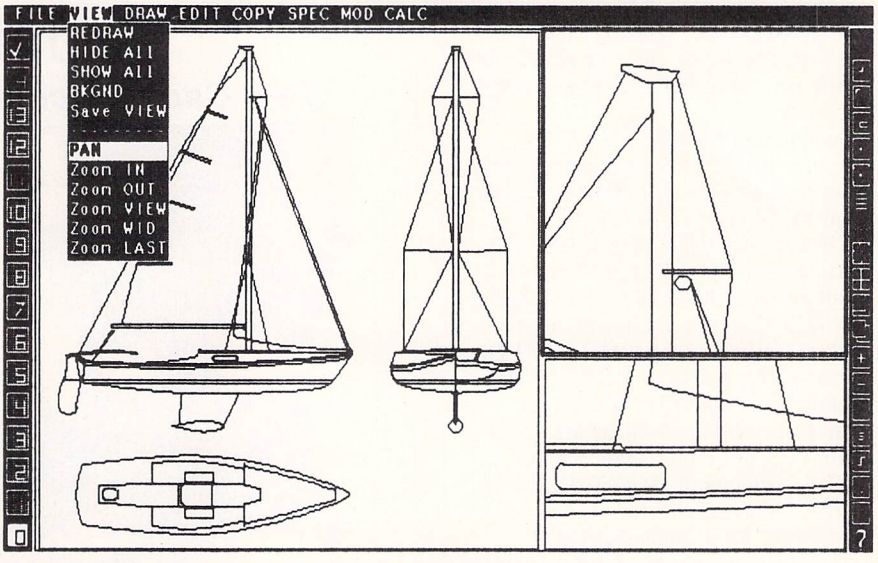
There is even an undocumented editor called NED. It is useful but isn't considered an official product yet and isn't moved to the working disk by FastCAD's installation. Users wanting to access NED must copy it manually and figure it out from its help menus, but it is worth the time.

FastCAD already has many fine features but continues to evolve, so more capabilities can be expected in the future. Nevertheless, its speed, windowing and current features make it a fine package as it stands now.

Incidentally, FastCAD isn't an isolated system. At least one company (CadPLUS of Albuquerque, N.M.) provides supporting add-ins for architectural, mechanical and electrical design. They also provide clip art and will have structural steel detailing and text font packages for FastCAD. I've used some of their packages, and they do a fine job of laying out floor plans (complete with clean wall corners) and elevation views complete with insertion of details from doorways and windows to appliances, furniture, plumbing and electrical systems.



Clear circuits: *Two-dimensional drafting package*



Refined functions: *FastCAD features windowed design*

For users who need conversions, FastCAD comes with utilities that move drawings to or from AutoCAD's DXF file format and to or from Evolution Computing's own EasyCAD program. FastCAD also can plot to ADI files or GEM Metafiles for placing drawings directly into Aldus' PageMaker or Ventura Publisher.

To some people, $2,295 might sound expensive for software, but FastCAD competes with similarly priced heavyweights in the computer-aided drafting and design world. To those who need its capabilities and speed, FastCAD actually may be a bargain.

Ernest E. Mau, a full-time, free-lance writer and Online Today *reviews editor, is based in Aurora, Colo. He is the author of several books and nearly 300 articles on microcomputer products and applications.*

Trademarks: Accent (Maynard Electronics); AutoCAD (Autodesk Inc.); Compaq and Deskpro (Compaq Computer Corp.); DuraPak (Sysgen Inc.); EGA Plus (STB Systems Inc.); EasyCAD and FastCAD (Evolution Computing); Epson and Epson FX (Epson America Inc.); GEM (Digital Research Inc.); IBM, PC, PC-XT, PC-AT and PC-DOS (International Business Machines Corp.); IOMEGA and Bernoulli Box (IOMEGA Corp.); MS-DOS (Microsoft Inc.); NEC and MultiSync (Nippon Electric Co.); Norton Utilities (Peter Norton Computing Inc.); PageMaker (Aldus Corp.); Proteus 286GT (Wintech Data Systems Inc.); VEGA Deluxe (Video-7 Inc.).

GO OLI or circle 11 on the Reader Service Form.

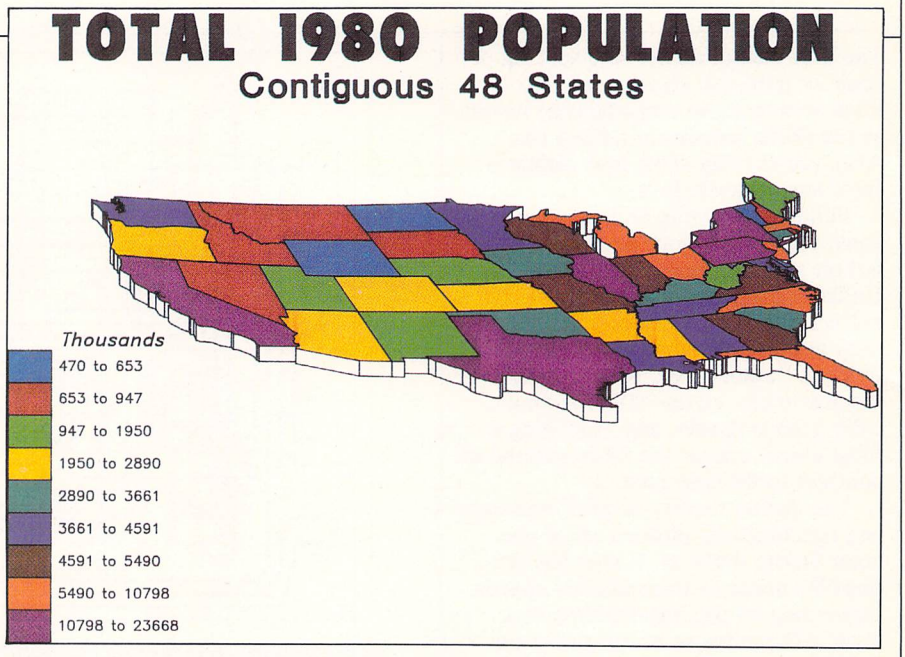
Atlas*Graphics

Does Mapping with Data Analyses

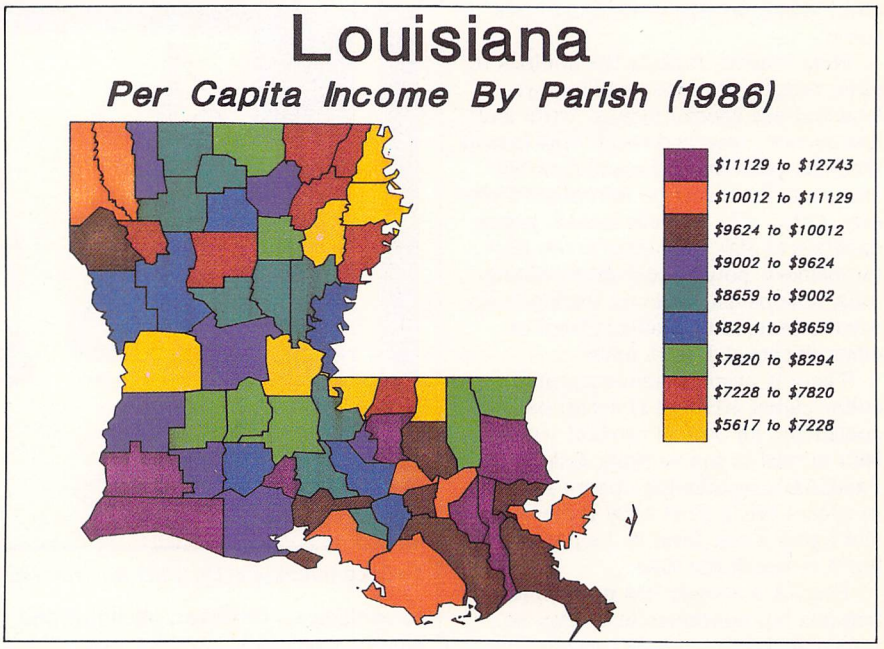
STSC Inc.
2115 E. Jefferson St.
Rockville, MD 20852
301/984-5123 or 800/592-0050

Computers: IBM PC, PC-XT, PC-AT and close compatibles.
Operating Systems: PC-DOS or MS-DOS version 2.0 or higher.
Media: Requires two diskette drives or one diskette drive and a hard disk.
Copy Protection: None.
Required Peripherals: Color (CGA or EGA) or monochrome (Hercules or CGA monochrome) video system.
Other Requirements: Minimum 512K RAM.
Optional Items: Plotter (supports 27 Amdek, Amplot, Hewlett-Packard, Houston Instruments, IBM, Roland and Sweet-P models); graphics printer (supports various Epson, Hewlett-Packard, IBM, Okidata, Toshiba and other color or black-and-white printers); Polaroid Palette film recorder.
Systems used for test: (1) 2.5MB Proteus 286GT (AT-compatible) with two diskette drives, 15MB hard disk, dual 15MB Sysgen DuraPak drives, STB Systems EGA Plus video card and Amdek Color 722 EGA monitor; running IBM PC-DOS 3.10 at 12MHz. (2) 640K Compaq Deskpro with two diskette drives, dual 10MB IOMEGA Bernoulli Box drives, Video-7 Vega Deluxe card and NEC MultiSync monitor; running Compaq MS-DOS 3.10. (3) Computers share Epson FX-85 printer and Hewlett-Packard 7475A Graphics Plotter.
List Price: $450 for basic Atlas* Graphics package; hundreds of supplemental boundary and data files are available at prices ranging from $95 to $12,500 apiece.

Reviewed by Ernest E. Mau



Mapping with data analyses: *Atlas*Graphics*



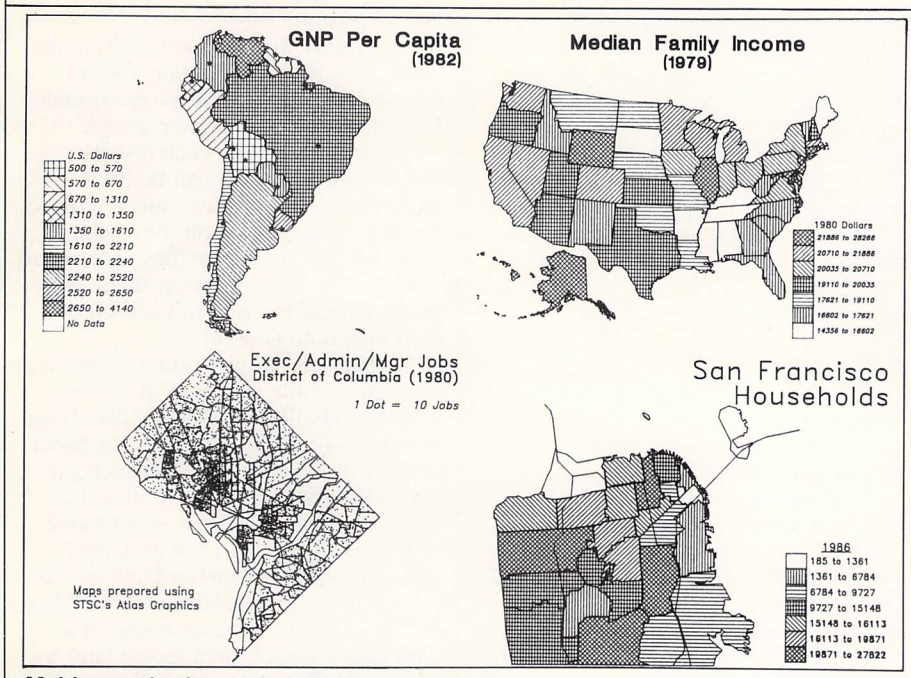
Preparing presentations: *Graphs use solid fill*

Preparing detailed analytical maps is a specialty. Many presentation graphics packages such as Lotus' Freelance Plus can use mapping templates to dress up other charts and graphs, but data analysis within the map itself is rare and takes a special program like Atlas* Graphics.

STSC's Atlas*Graphics (version 2.1) generates maps on which such data as population, income, occupations and the like are shown on geographic regions. The maps are drawn from "boundary files," while data for analysis are taken from special data files. Using area filling, one or two variables can be divided into as many as 20 ranges and identified using selections from 26 hatching patterns and 15 colors. Dot-density maps also may be created to show data distributions using dots representing user-defined quantities.

Installation is highly automated, and the program can be run from diskettes or a hard disk. For hard disks, the basic package needs almost 2.5MB of storage space, little of which may be recovered by deleting unneeded device drivers.

Generally, Atlas*Graphics is easy to navigate and use, relying on Lotus-like menu bars for primary actions and assorted menus for detailed instructions. The flow is so smooth, the manual isn't needed often. I ran it for days without looking at the manual except for installation instructions. Thereafter, the program was almost self-explanatory except for such complex operations as merging data files, editing boundary files or importing and exporting DIF-format data. An excellent tutorial is provided, and online help is adequate but not overbearing.



Multi-map plotting: *Atlas*Graphics is flexible*

Atlas*Graphics is extremely flexible. Besides color- and pattern-filling choices already cited, it gives extensive control over legends and titles with eight fonts, 16 type sizes, 15 text colors, justification, underlines and italics. Dozens of symbols may be used, for instance, to mark capital cities with stars, flags, circles or other choices. Labels and comments can be added, edited, moved or hidden.

Fast zooming can zero in on a particular area of interest, for example, the southern states, to examine or plot just that section. Atlas*Graphics trims borders neatly, so users don't waste hours manually deleting boundaries to limit a plot to a specific area.

Map contents and boundaries are under user control, as are placement and size relative to titles and legends. Regions can be exploded or grouped. However, titles always appear at the top, and I find no way to run them at the bottom or vertically along the sides. While a legend can be put in any corner and the type font and size may be manipulated, the size of the legend block as a whole cannot be controlled. I sometimes found legend blocks overbearing, with sizes overpowering the maps, so I'd like a way to control legends sizing.

Pen plotting goes smoothly, with no noticeable glitches. The user controls the map's size, position on the paper, pen width and three pen speeds. The program allows pen or turret changing, giving full color capability, and it even tells the user what color goes in each pen stall. Pen motion is optimized so all elements of one color plot before the next.

Printing is less satisfying, both in aesthetics and procedure. One first plots to a disk file, which takes almost as long as plotting to a pen plotter. That file then is run through a "PostPrint" utility. However, the user cannot control printer density or do multiple passes, and PostPrint doesn't convert colors into raster patterns. Solid color-filled maps print solid black, so printing must be limited to pattern fills.

Plotting to screen is adequate for developing maps, but the resolution on an EGA system isn't what I'd expect. It seems little better than a colored, high-resolution CGA display.

Slick as it is, Atlas*Graphics can be expensive. Supporting files included with the $450 package are limited. A few city and state boundaries are merely samples, and the only useful boundary files cover the United States and South America. No world, European, Asian or other maps are included. The few data files provided also are limited and dated.

Effective mapping requires importing files or buying them from STSC at $95 to $12,500 apiece. Detailed boundary files for the entire United States add up to $36,360, not including all data files. Complete boundary files for the Federal Republic of Germany total $54,650 plus $1,000 per city and $1,100 per postal region for postal codes.

Since no supplemental files were provided, I couldn't gauge their accuracy or utility.

So, despite ease of use and outstanding performance, Atlas*Graphics seems intended for sophisticated corporate users needing intricate data-oriented maps and having money enough to purchase additional files. Individuals and small businesses needing only occasional illustrative mapping probably should consider less elaborate packages.

Ernest E. Mau, a full-time, free-lance writer and Online Today *reviews editor, is based in Aurora, Colo. He is the author of several books and nearly 300 articles on microcomputer products and applications.*

Trademarks: Atlas*Graphics (STSC Inc.); IOMEGA and Bernoulli Box (IOMEGA Corp.); Compaq and Deskpro (Compaq Computer Corp.); DuraPak (Sysgen Inc.); EGA Plus (STB Systems Inc.); Epson and Epson FX (Epson America Inc.); IBM, PC, PC-XT, PC-AT and PC-DOS (International Business Machines Corp.); Lotus and Freelance Plus (Lotus Development Corp.); MS-DOS (Microsoft Inc.); MultiSync and NEC (NEC Corp.); Proteus (Wintech Data Products Corp.); Vega Deluxe (Video-7 Inc.).

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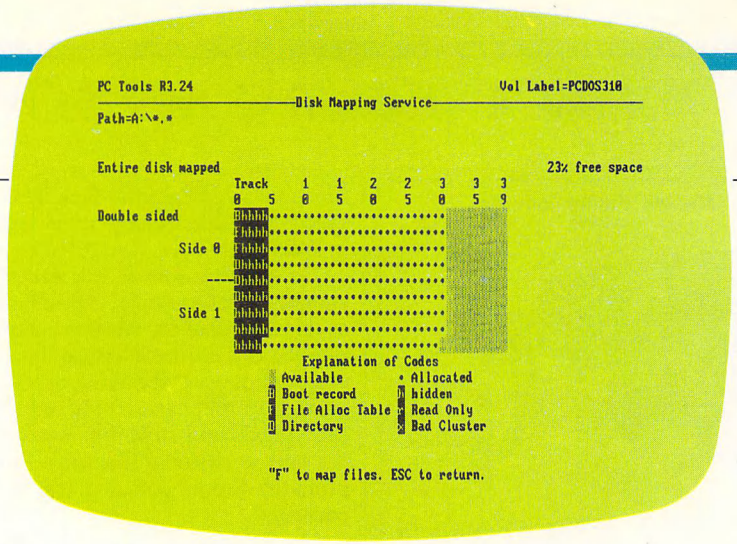

Disk mapping service: *PC Tools has fast functions*

PC Tools 3.24

Gives Better, Faster Disk Management

Central Point Software
9700 S.W. Capitol Hwy., #100
Portland, OR 97219
503/244-5782

Computers: IBM PC, PC-XT, PC-AT, PS/2 (Models 30, 50 and 60) and most compatibles.
Operating System: PC-DOS or MS-DOS version 2.0 or later.
Media: Supplied on both 5.25-inch and 3.5-inch diskettes; requires one diskette drive or a diskette drive and a hard disk.
Copy Protection: None.
Required Peripherals: None.
Other Requirements: Minimum 128K RAM; 256K needed for memory-resident installation.
Optional Items: Supports Lotus/Intel expanded memory.
System used for test: 2MB AST Premium/286 computer with 80287 math coprocessor, Genoa SuperEGA HiRes Video Adapter, Sony Multiscan monitor, 80MB hard disk and Logimouse C7 mouse; running MS-DOS 3.2.
List Price: $39.95

Reviewed by Hardin Brothers

Some software upgrades are so subtle that a user seldom knows what was changed or why. Others are so extensive that the entire personality of a program changes. The newest version of Central Point Software's PC Tools has found a middle ground. The main program is faster and easier to use than before, while the additional five programs on the distribution disk provide special functions of particular interest to hard-disk users. Taken as a whole, PC Tools duplicates almost all capabilities of other popular utilities and usually is faster and easier to use.

The main program, PCTOOLS.EXE, can be a normal program run from the DOS prompt or a memory-resident program. When installed in the second mode, you can specify how much memory the program should use and whether it will be activated by pressing [CONTROL-ESCAPE] or the Control key plus a Function key.

Regardless of how it is loaded, PC Tools runs the same way. It has two main menus, with both appearing as lists of keywords at the bottom of the screen.

The first menu also displays a list of files from any subdirectory on any drive. You can select one or more files from the directory by moving a cursor bar and then selecting a function. You can copy files to another directory or disk; move them (copy and then erase the original); compare two sets of files; rename, verify, print or edit a file; or change a file's attributes and date stamp. You also can send a directory listing to a printer, sort a directory temporarily or permanently and use wildcards to describe which files should be displayed or selected.

The second menu has similar commands for entire disks. You can rename a disk, verify the entire surface, view or edit any sector, undelete both files and subdirectories or search the entire disk for a specific string of bytes of hexadecimal digits. You can create or delete subdirectories, or move a subdirectory from one part of the directory tree to another. Additional options map the disk's contents, print information about the computer (including a speed rating), copy or compare entire disks and do a great deal more.

Two additional programs perform fast hard-disk backups and restorations. If you have two diskette drives, these programs can alternate between them, so you can change one diskette while the programs write to or read from the other. The Backup program doesn't require that the diskette be preformatted since it creates its own unique format as it writes to each diskette. The Restore program can be used to verify that a backup was successful, to correct errors in files on the backup diskettes and to restore files to the hard disk. Unlike some utilities, these programs cannot be used to back up one hard disk onto another.

A third special program, Compress, analyzes the file structure of a disk, unfragments files and moves files from one part of a disk to another for faster access. It is difficult to time such programs accurately on a hard disk, but Compress seemed to run about twice as fast as the Speed Disk program included with the Norton Utilities 4.0.

The last two special programs, Mirror and Rebuild, save an image of a hard disk's system area to use later to restore all files on the disk in case of an accidental reformatting or a media failure.

I like most of the PC Tools' package very much. Some functions aren't as sophisticated as those in more specialized utility packages, but it does enough things very well that I use it several times daily.

A few omissions do bother me. If I search a disk for a string, it is difficult to determine what file contains the string. The Compress utility can report whether files should be unfragmented or rearranged, but it gives little indication of how disorganized the disk is. The Backup utility doesn't allow selecting multiple subdirectories or files interactively but does allow that selection to be made through a special command file.

Overall, however, PC Tools is excellent. Even if you already have other disk utilities that duplicate some of its capabilities, its low cost and ease of use should earn it a place in your software library.

Hardin Brothers is an associate editor of 80 Micro *and a frequent contributor to several other magazines.*

Trademarks: IBM, IBM PC, PC-XT, PC-AT, PS/2 and PC-DOS (International Business Machines Corp.); Logimouse C7 (Logitech Inc.); MS-DOS (Microsoft Corp.); Multiscan (Sony Corp.); PC Tools (Central Point Software Inc.); Premium/286 (AST Research Inc.); SuperEGA HiRes (Genoa Systems Inc.); The Norton Utilities (Peter Norton Computing Inc.).

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Aegis Draw Plus

Gives the Amiga CAD Capabilities

Aegis Development
2215 Pico Blvd.
Santa Monica, CA 90404
213/392-9972

Computer: 512K Commodore Amiga.
Operating System: AmigaDOS and Workbench 1.2.
Media: Requires one 3.5-inch disk drive.
Copy Protection: None.
Required Peripherals: Monitor.
Other Requirements: 512K RAM.
Optional Items: Printer or plotter; 20MB hard disk and 1MB memory are recommended.
System used for test: Commodore Amiga 1000 with 1080 monitor, external disk drive and Epson RX-80 FT+ printer.
List Price: $259.95

Reviewed by Cheryl Peterson

Aegis was among the first companies to support the Amiga, so it got a jump on other developers in writing a computer-aided drafting package. The original Aegis Draw was a good start. Draw Plus is an improvement but still isn't perfect, although the features it has are difficult to fault since most work flawlessly.

Before criticizing it, I should note that Aegis has packed this program with features. Modeled after CAD programs for mainframes, Draw Plus offers more flexibility in a desktop computer program than could be found in early mainframe packages. While it has many drawing tools used by other Amiga drawing packages, it offers a precision not found in those programs. It handles measurements in smaller English and American units or in feet. Although it has the standard cut, copy and paste commands, it offers many more editing commands.

Draw Plus treats each figure created with any of its tools as an object, rather than as a group of pixels, so you can grab a circle or rectangle and move it on the page. Any created object can be poked, prodded and manipulated into the shape you wish and then moved wherever you choose. You can use a clone command to create an exact duplicate of any object. You also can create libraries of objects to use in drawings.

The available object creation tools are line, rectangle, polygon, freehand, arc, circle, text, dimension lines and part. The editing tools are drag it, rotater, clone, eraser, explode, sizer, back, color and stats. These functions alter only one object at a time. Other modification functions act on all objects contained in a predefined area. Once a frame has been placed around a group of objects, they can be resized, rotated, distorted, painted a new color, repatterned or regrouped, and the weight of the lines used for drawing them can be reassigned.

Draw Plus offers advanced features such as layering (up to 250 layers), data snapping, grid snapping, rounding and smoothing. A format command sets up a page size for plotter output.

While Draw Plus fully supports multitasking when used with a standard 512K computer, it is easy to run out of memory. Running Draw Plus from the CLI will give it a little more room to operate, but it makes multitasking more difficult. Of course, the number of open drawings and windows affects memory consumption.

The program boots in interlace mode at 640 by 400 pixels, but you can change resolution from inside the program. While Aegis has tried to minimize Amiga flicker by using darker colors, that makes some menu options difficult to read.

The documentation is good. Preliminary documentation contains barebones instructions for using the program. *Inside Aegis Draw*, another manual that comes with the package, contains tutorials on using the package's features. It also offers some theory behind the creation of the program. The requisite explanations of tools and editing functions explain how each is used. A separate section explains use with Genlock. A glossary explains common terms, and though it was upside down in my manual, there is an index at the back.

Appendixes include sections on menu commands, hardware specifications and recommendations (a 20MB hard disk and at least 1MB of memory are recommended). Another appendix explains the file format used. With this information, long-time Amiga users or technically oriented individuals can figure out how to write their own plotter drivers if their plotters aren't among those already supported.

Plotters supported include Apple, Mannesmann Talley's Pixy 3, Penman, Epson HI80, four Hewlett-Packard models and four Roland models. Not having a plotter available, I couldn't test the plotter functions, but Draw Plus supports most printers.

My only problem with the program was entering text labels. If I typed text and tried to print it without pressing the Return key to signal the text's end, the program wouldn't print my text. If I pressed the Return key, I got an empty space at the beginning of the next line.

Aegis Draw Plus is a bit complicated at first, but it becomes easier to use with experience. Putting the fast menu onscreen all the time would have made it much simpler to use.

Cheryl Peterson, a free-lance writer from Miami Beach, writes reviews for several computer magazines. Her CompuServe User ID number is 70007,2406.

Trademarks: Aegis and Draw Plus (Aegis Development Inc.); Commodore Amiga (Commodore Business Machines Inc.); Epson RX-80 FT+ (Epson America Inc.).

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@Liberty:

A Spreadsheet Compiler

SoftLogic Solutions
One Perimeter Rd.
Manchester, NH 03103
603/644-5555

Computer: IBM PC, PC-XT, PC-AT, PS/2 and compatibles.
Operating Systems: PC-DOS or MS-DOS version 2.0 or higher.
Media: Requires two diskette drives or one diskette drive and a hard disk.
Copy Protection: None; compiled spreadsheets may be distributed up to the number paid for through licensing fee.
Required Peripherals: Hercules Graphics Card or EGA card required for graphics support.
Other Requirements: Minimum 256K RAM.
Optional Items: Hard disk recommended but not required.
System used for test: 640K IBM PC-XT with Hercules Graphics Card Plus, two diskette drives, Maynard 20MB hard disk and Okidata Microline 84 printer; running PC-DOS 3.1.
List Price: $99.95

Reviewed by William J. Lynott

With all the ho-hum copycat software around today, it is refreshing to come across a truly innovative product. @Liberty (pronounced "at liberty") is a spreadsheet compiler that enables you to create and distribute fully executable templates in Lotus 1-2-3. The twist is that those compiled templates can be run without a copy of 1-2-3 because the program code needed to run the spreadsheet application is bundled with the file you distribute. It is all legal with a licensing arrangement that calls for a modest fee for each copy you distribute.

Without effort, I can think of many potential uses. Large companies requiring many divisions or departments to use the same templates for budgeting, planning or other purposes are obvious places. Ordinarily, every department would need its own copy of 1-2-3, plus people trained to use it. With an @Liberty template, individual users would not have to own copies of the master program, and training could be limited to the relatively simple requirements of the specific application.

Then there are consultants or other professionals who develop spreadsheet applications for others in their fields. With @Liberty, such specialized applications can be developed and sold to people who do not own or even understand Lotus 1-2-3. An instruction manual is supplied for each licensed copy.

The possibilities go on and on.

@Liberty consists of two programs: Prepare compiles the original worksheet, and Run is distributed to the user with the compiled worksheet. Their use is simplicity itself.

The first step is to create an original template with 1-2-3. According to the @Liberty documentation, "similar" spreadsheet programs also work. Most (but not all) macros and most other features in 1-2-3 are supported by @Liberty.

Having created a master worksheet, load the Prepare program, supply both old and new filenames, and sit back. Compilation is automatic and takes but a few minutes. Put a copy of Run on the same disk as the newly compiled spreadsheet, and you have an executable and transportable copy of the original spreadsheet.

To see how well @Liberty lived up to its claims, I compiled several spreadsheets I use regularly in my work. With one exception, the program worked perfectly. Even custom menus I developed in the original versions made the translation without harm. The problem I had was with an unusually large worksheet containing many macros. Although it was within the size limits described in the documentation, I kept getting an error message saying that there were too many rows for the program to handle.

@Liberty will work with spreadsheets of up to 2,048 rows for a total of 65,000 cells. That isn't the full capacity of the more than 8,000 rows in 1-2-3, but it is adequate for most practical models.

I made a call to the @Liberty support line, and the person who answered my call suggested a possibility that turned out to be correct. I had a macro range name installed in the last row of my original 1-2-3 model. This produced a compiled version too large for @Liberty to handle. Moving the named cell near the top cured the problem.

The same spreadsheet also turned up a minor bug in @Liberty that the publisher says is now corrected. All registered owners will get a free update.

Compiled models do not reveal any underlying formulas or macros used to create the original, and the user cannot type any information into or change protected cells in any way. If an attempt to type data into any but unprotected cells is made, the user gets a beep and the message "not an input cell."

If you have defined graphs in your original, the compiled version can create the same graphs. The slash command that calls up the menu in 1-2-3 is used for the same purpose in models compiled by @Liberty; however, only the commands needed to run compiled templates are activated.

If you create spreadsheet templates to be used by people in other locations, @Liberty is one product to examine. The license fee for each compiled copy you distribute is a reasonable $10. Considering that the structural information is hidden from the user and that the user doesn't need a copy of 1-2-3 to run it, you can hardly go wrong. Remember, however, that some complex macros that function properly in 1-2-3 may not be supported by @Liberty.

William J. Lynott is president of W.J. Lynott Associates, a management consulting firm in suburban Philadelphia. His CompuServe User ID number is 70007,420.

Trademarks: @Liberty (SoftLogic Solutions Inc.); Hercules Graphics Card (Hercules Computer Technology); IBM, IBM PC, PC-XT, PC-AT, PS/2 and PC-DOS (International Business Machines Corp.); Lotus and Lotus 1-2-3 (Lotus Development Corp.); MS-DOS (Microsoft Inc.); Okidata Microline (Okidata Inc.).

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Best Choice

A Decision Analyzer

Sterling Castle Software
702 Washington St., #174
Marina del Rey, CA 90292
213/306-3020

Computers: IBM PC, PC-XT, PC-AT and compatibles.
Operating System: PC-DOS or MS-DOS version 2.0 or higher.
Media: Distributed on one diskette; requires one diskette drive.
Copy Protection: None.
Required Peripherals: None.
Other Requirements: Minimum 128K RAM.
Optional Items: Color monitor; hard disk.
System used for test: 512K Victor V286 computer with EGA monitor, 20MB hard disk and 1.2MB diskette drive; running MS-DOS 3.1.
List Price: $49.95

Reviewed by Franklyn Jones

I reviewed a decision analyzer called Decision Pad from Apian Software for *Online Today's* January 1988 print edition. That $99 product was a rather elaborate package based on research done at Harvard University. By contrast, Sterling Castle Software's Best Choice is a more streamlined decision analyzer using a "paired comparison" technique. In short, Best Choice breaks a complex evaluation into a series of paired comparisons. By comparing A with B, then A with C, then B with C, etc., the decision-maker can select preferences between the various pairs.

Best Choice installs in seconds and quickly creates its own subdirectory if loaded onto a hard disk. Calling up the program takes you to a main menu screen containing 14 menu options divided into three areas: Problem Data, Analysis and Reports. To begin, always select a command from the Problem Data area. For example, type "O" to Open or define a new problem, or type "G" to Get or retrieve an existing problem from a data disk.

Once you've opened a new problem, type appropriate data into predefined fields that let you define the problem name, the number of people involved in the decision process, the choices to evaluate and the criteria on which various choices will be judged. You may assign weighted values between 1 and 100 for each criterion. The final task in setting up the problem is specifying how many paired comparisons to make. The program can handle up to 210 paired comparisons for complex evaluations.

After you've finished documenting the parameters of the problem, you're ready to begin the actual paired comparisons. During this phase, the screen presents two options at a time, based on one criterion at a time. Your job is to select which choice you like best based on the particular criterion. For example, you may be deciding whether you want to vacation in Hawaii or Alaska based on the weather in those two states.

After completing all paired comparisons, you must return to the main menu and type "F" for Final results. Best Choice quickly determines the best choice based on your preferences and the various weighted criteria. The results appear onscreen and can be transferred to hard copy, if desired.

I performed several evaluations and found myself growing addicted to this program. Best Choice is fun to use, and I think this is the first time I've said that about a business-oriented software tool. It is so simple to learn and use that you can set up a problem and get results within minutes. The recommendations Best Choice makes are based on your input, so if you don't agree with them, you can blame only yourself.

My complaints about Best Choice are minor. Requiring users to return to the main menu to execute commands that continue the evaluation process is annoying. There should be some way to bypass this. Fortunately, the program is memory-resident, so little time is lost. My other complaint is that the online help screens seemed to pop up too often, even without pressing the required Help key.

The documentation for Best Choice is only 67 pages long, but it is clear and concise. After one quick scan, you'll be ready to be productive with the program. Although this is not a software package that is "vital for the success of today's busy executive," Best Choice is at least a thought-provoking, well-designed product requiring little training but producing interesting results. It isn't for everyone, but it is a good value for someone who can make use of its capabilities.

Franklyn Jones, formerly the managing editor of Interface Age *magazine and editor-in-chief of* IBM PC Update *magazine, has written articles for various computer publications, is a regular contributor to* Online Today *and serves as a marketing and communications consultant.*

Trademarks: Best Choice (Sterling Castle Software); IBM, IBM PC, PC-XT, PC-AT and PC-DOS (International Business Machines Corp.); MS-DOS (Microsoft Corp.); Victor and V286 (Victor Technologies Inc.); Decision Pad (Apian Software Inc.).

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GEOS 128 Graphics Oriented Operating System
Manufacturer: *Berkeley Softworks*
Computers: *Commodore 128 or 128D.*

ResumeWriter Software
Manufacturer: *Bootware Software Co.*
Computers: *Apple Macintosh and Macintosh Plus.*

Bottomline V Planning & Budgeting Utility
Manufacturer: *ILAR Systems Inc.*
Computers: *IBM compatibles; Apple Macintosh; CP/M computers.*

Microsoft Macro Assembler 5.0
Manufacturer: *Microsoft Corp.*
Computers: *All MS-DOS or PC-DOS computers.*

QuickBasic 4.0 Program Development Tool
Manufacturer: *Microsoft Corp.*
Computers: *IBM compatibles.*

Microsoft Works Integrated Software
Manufacturer: *Microsoft Corp.*
Computers: *IBM compatibles.*

Fancy Font Dot-Matrix Typesetting Software
Manufacturer: *SoftCraft Inc.*
Computers: *IBM compatibles.*

Microsoft Word 4.0
Manufacturer: *Microsoft Corp.*
Computers: *IBM compatibles.*

Spellin! Proofreader for Lotus Programs
Manufacturer: *Turner Hall Publishing*
Computers: *IBM compatibles.*

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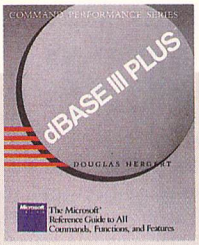
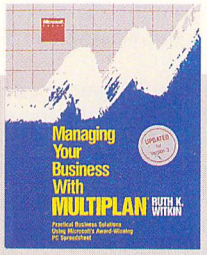

COMMAND PERFORMANCE SERIES
dBASE III PLUS
DOUGLAS HERGERT
The Microsoft Reference Guide to All Commands, Functions, and Features

dBase III Plus
By Douglas Hergert
Microsoft Press, 1987
656 pages, $24.95 (softcover)

dBase III Plus explains the more than 300 dBase commands. Reviewer William J. Lynott calls it a valuable reference for those exploring dBase III programming.

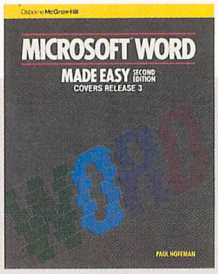
The Big Tip Book for the Commodore
By John Annaloro and Bert Kersey
Bantam Books, 1987
192 pages, $16.95 (softcover)

This entertaining book presents tips for converting programs to the Commodore 128 and ways to speed up memory and disk operations. "You'll have a hard time finding a book that surpasses the usefulness of this one," writes reviewer James Moran.



Managing Your Business With Multiplan
By Ruth K. Witkin
Microsoft Press, 1987
525 pages, $19.95 (softcover)

According to reviewer Robert Sanchez, this book offers expert assistance with Multiplan. You'll learn to analyze opening a business and closing the books.



Steve Thomas

***Microsoft Word Made Easy* (second edition)**
By Paul Hoffman
Osborne/McGraw-Hill, 1987
374 pages, $16.95 (softcover)

Instructions are given for starting with Microsoft Word and using its basic and advanced features. Reviewer Lindsy Van Gelder says that although the book "avoids the dreaded pitfalls of techspeak," it is dated and not as helpful as other books on the market.

A WordStar Survivor's Guide to WordPerfect
By W.S. Farewell and W.P. Forever
WordPerfect Publications, 1987
161 pages, $9.95 (softcover)

WordPerfect Corp. has created a book for former WordStar users. Each chapter is dedicated to a specific function, such as formatting, printing or file management. Reviewer William J. Lynott says the book contains a good measure of advice to ease the process of learning a new program.

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The Communications Electronics Super Modem 2400 will send and receive full duplex data at 2,400, 1,200, 600 and 300 bits per second over your regular telephone line for only $199.95 each. (Order # SM2400-PA)

Communications Electronics Super Modem 2400 can operate 2,400, 1,200, 600,300 bps full duplex or half duplex over your regular voice grade telephone line. At 2,400 bps they are sync/async, over the switched network; CCITT V.22bis compatible. At 1,200 bps they are also sync/async over the switched network and are switchable between Bell 212 or CCITT V.22/V.23 compatibility. At 600 and 300 bps they are async over the switched network. At 600 bps they are CCITT, V.23 compatible and at 300 bps they are Bell 103 and CCITT V.21 compatible. The CCITT V.22 and V.23 compatibility makes these modems suitable for use worldwide.

The Super Modem 2400 automatically adjusts itself to match terminal's (or computer's) baud rate, parity and stop bits. The default setting is CCITT 2,400 bps but all parameters can be changed in the modem's non-volatile memory by using the extended "AT" command set. 11 status LED's are provided: Auto answer, off hook, high speed, DSR, RTS, DCD, TD, RD, RI, CTS and DTR. Switches are provided for constant carrier, holding DTR high, crossing pins 2 and 3, 11 bit characters and auto answer.

The modem is fully compatible with the Hayes® "AT" command set at all speeds and uses the new Hayes® 2400 commands for synchronous operation making the Super Modem 2400 compatible with virtually all IBM PC communications software. An internal speaker with software selectable volume is included. The Super Modem 2400 has an on-line help screen which shows communication parameters.

Super Modem 2400 Specifications

OPERATION: Full duplex sync or async on 2 wires
DATA RATES: Synchronous 2400 bps or 1200 bps; asynchronous 2400, 1200, 600 or 300 bps.
MODULATION: FSK and PSK
CHARACTER FORMAT (ASYNC): 10 or 11 bits including start and stop bits
EQUALIZATION: Automatic adaptive
DIAGNOSTICS: Self test, local and remote analog and digital loopback
DCE interface (stand alone models) EIA RS232C
VF interface 10 foot cable with RJ-11 jack. FCC approved
DIMENSIONS: 8½" x 6¼" x 1½" – weight 1.5 lbs. (0.69 Kg.)

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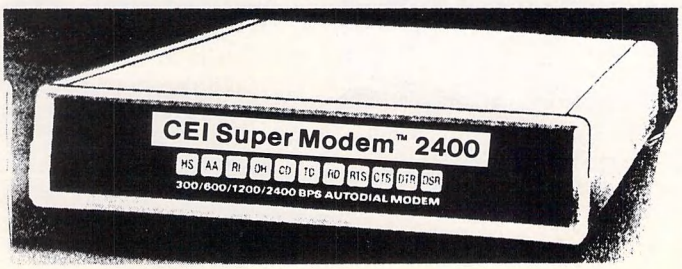

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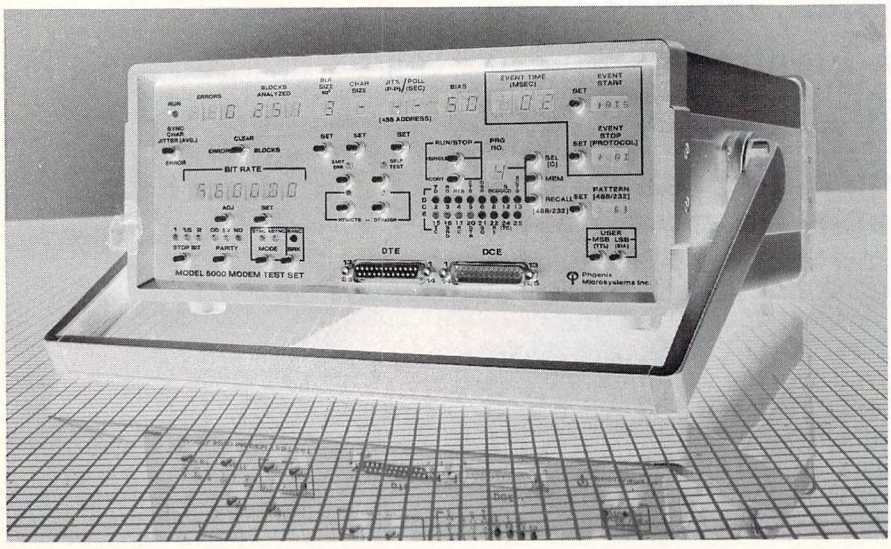


Modem Test Set

Phoenix Microsystems has introduced the Phoenix Model 5000 Modem Test Set, an intelligent, automatic, IEEE-488, remote-control unit.

Used for testing modems, the Phoenix 5000 runs such tests as BERT, full-duplex or PING PONG polling, bias distortion, frequency measurement, interface event timing and more.

For information, contact Phoenix Microsystems Inc., 991 Discovery Dr., Huntsville, AL 35806; 800/826-6798 or 205/721-1200.

Flash-Up Productivity Tool for the IBM PC

Software Bottling has introduced Flash-Up and the Flash-Up Developer's Toolbox.

Flash-Up is a productivity tool that enhances everything from applications to programming languages to mice. It is a memory resident keyboard macro processor, a smart menu-maker and a note-maker.

The Flash-Up Developer's Toolbox adds programmability to Flash-Up, allowing users to take the macros, menus and notes created with Flash-Up and control them from their programs. Both are designed for the IBM PC and compatibles.

For information, contact The Software Bottling Co. of New York, 6600 Long Island Expressway, Maspeth, NY 11378; 718/458-3700.

QuickTalk

QuickTalk from SilverSoft is a TSR communications package that pops up like SideKick and types directly from an external source, such as CompuServe, into a word processor or almost any other applications package.

QuickTalk performs up to 40 simultaneous translations of up to 15 characters at a time, including any ASCII character, any item on the cursor pad or both. The retail price is $79.95 plus $5 shipping.

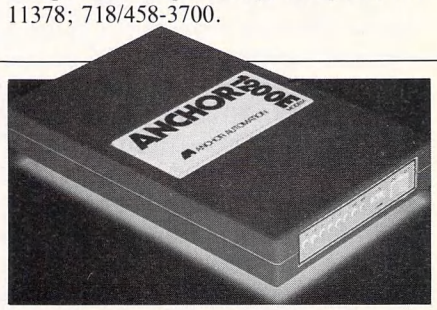
For information, contact SilverSoft Inc., 1301 Geranium St., N.W., Washington, DC 20012; 202/389-0280. To order, call 800/221-4644, operator 12.

Data Compression

Anderson Jacobson has introduced proprietary intelligent data compression up to 4:1 for 1200 and 2400 baud modems.

The AJ DSM Data Speed Multiplier combines asynchronous data compression with AJ's enhanced MNP Level 4 for error-free data transfer up to 9600 baud. Dynamic Packet Sizing automatically adjusts to line quality so optimum performance is attained even on poor-quality lines. The stand-alone compression device lists for $395.

For information, contact Anderson Jacobson Inc., 521 Charcot Ave., San Jose, CA 95131; 408/435-8520.



Anchor that Modem

Anchor Automation has introduced the Anchor line of modems for micro and other computer applications.

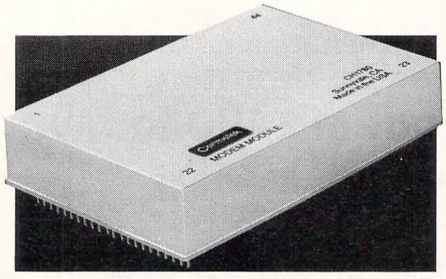
Included in the new line are 1200-baud internal and external models listing for $149 and $189, respectively. Both are Hayes-compatible. AnchorTalk software is supplied with the internal modem, which can be configured for communication ports 1, 2, 3 and 4.

For information, contact Anchor Automation Inc., 20675 Bahama St., Chatsworth, CA 91311; 818/998-6100.

Modem Module

Cermetek Microelectronics has introduced the CH1780 modem module. This 2400, 1200, 0-300 baud-intelligent module is ideal for mainframe and laptop computers, terminals and products requiring off-site diagnostic applications.

Measuring 2.54 inches by 3.74 inches, the module features a low-power standby mode, auto-dial, auto-answer, AT command compatibility, full call-progress detection and full diagnostic test set.



For information, contact Cermetek Microelectronics Inc., 1308 Boregas Ave., Sunnyvale, CA 94088-3565; 408/752-5000.

XChange File Transfer

XChange from Nochange Software is an unattended file-transfer program allowing multiple IBM PCs to easily share entire directories of files.

New files or those updated on one IBM PC can automatically be transmitted without assistance to other PCs. XChange also can be used to make automatic off-site backups of critical data. The retail price is $149.95.

For information, contact Nochange Software, 540 Silver Pine Trail, Roswell, GA 30076; 404/587-3815.

Guidelines to Requesting Information Through OLI

Online Inquiry

Online Inquiry is *Online Today*'s electronic version of the traditional reader inquiry card. To request additional information about products or services described in *Online Today*, simply access CompuServe and type GO OLI at any prompt.

CompuServe Page OLI-1
ONLINE TODAY ADVERTISERS
ONLINE INQUIRY (OLI)
1. OLI Instructions
2. Online Today Display Ads
3. Print Edition Reviews
4. Shopper's Guide Mini-Ads

Display Ads

GO OLI-160. Inquiries to this section will be followed by a brief description of the *Online Today* ad. To request additional printed information, simply enter your name and address at the prompts. OLI will add your User ID number and electronically forward your request to the appropriate advertiser(s). The names, addresses and User ID numbers will also be forwarded via US Mail at the end of each month.

CompuServe Page OLI-160
ONLINE TODAY ADVERTISERS/OLI
1. Feb. 1988 Advertisers
2. Jan. 1988 Advertisers
3. Dec. 1987 Advertisers

Editorial Articles/Reviews

At the end of each electronic version product review, you'll be asked if you wish to request further information through the Online Inquiry system. A "yes" response will let the system prompt you for your name, address and other information so that your request can be forwarded to the appropriate company. If you respond "no," the system will return you to the previous menu.

To request information about products reviewed in the print edition, go to page OLI-280 and select the appropriate listing, such as February Hardware Reviews. At the next menu, select the product you're interested in. If you answer "yes" at the question prompt, the OLI system will prompt you for the necessary information.

Requests to these sections will be stored and forwarded by traditional mail once each month.

CompuServe Page OLI-280
REVIEW LISTINGS/PRINT EDITION
1. Feb. Hardware Listings
2. Feb. Software Listings
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GO OLI-70 to get information about *Online Today*'s mini-ad program.

To request information from Shopper's Guide advertisers, follow the instructions outlined in each ad.

CompuServe Page OLI-70
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PC Link Modem

The PC Link modem from RCA Global Communications provides real-time receipt of telex messages even when the computer is off.

Used in conjunction with RCA PC Link software on an IBM PC or compatible, the unit provides full send and receive telex capabilities without tying up background memory. The external modem features auto-answer, 300/1200 baud with a 256K buffer and a five-hour backup battery.

For information, contact RCA Global Communications Inc., 201 Centennial Ave., Piscataway, NJ 08854; 201/885-2236.

Communications Software for IBM

A powerful, open data communications package for use in executive work stations and office environments is available from Peregrine Data Systems for the IBM PC, PC-XT, PC-AT, PS/2 and compatible computers.

Called PereLine, the new datacom package permits the user to customize its functions, create special menus and macro scripts, implement all DOS commands, work with multitasking programs and communicate simultaneously with two other computers. The retail price is $69.95.

DisKey Write Protection

DisKey from CroResearch is used for temporary write protection on computer diskettes and disk drives.

For information, contact Peregrine Data Systems Inc., 5365 Baron Dr., San Jose, CA 95124; 408/356-6105.

The product is an alternative to the adhesive-backed write/protect tabs most manufacturers include with each box of disks. The retail price is $2.98.

For information, contact CroResearch, 100 Meadow Ct., P.O. Box 129, Lyons, CO 80540; 303/823-5088.

Go Online for More Product Announcements

The following product announcements are available this month in *Online Today Daily Edition* by typing GO OLT-250 at any CompuServe Information Service prompt.

PC Tools Deluxe, *a DOS utility package, Central Point Software.*
Desk-Link, *a high-speed serial-transfer software package for the IBM PC and compatibles, Traveling Software Inc.*
ReTreeve, *a RAM-resident IBM PC program that allows users to file, find and organize hard disk files, Software Directions Inc.*
Programmer's Calculator, *pop-up calculator for the IBM PC, PC-XT, PC-AT, PS/2 and compatibles that emulates the Hewlett-Packard HP-16C handheld calculator, CalcTech Inc.*
Bookmark Plus, *desk accessory for the IBM PC that backs up RAM, Intellisoft International.*
Perfect Vision, *real-time video digitizer for the IBM PC-XT, PC-AT and Commodore Amiga 500, 1000 and 2000, SunRize Industries.*
Copy II Plus, *utility program for the Apple IIgs, Central Point Software.*
NexView, *information managing and manipulating tool for the IBM PC, PC-XT, PC-AT and compatibles, Windjammer Software Inc.*
Applications Plus, *three enhancements for dBase, Fox & Geller Inc.*
Graph-in-the-Box (Version 2.0), *instant graph generator for the IBM PC family, PS/2 and compatibles, New England Software.*

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February issue, not valid after May 1988.

Downloading Directions

In the last column, we explored commands available for searching and browsing files in the data libraries of the various forums. This month, we'll continue the data library research, learning how to retrieve files you find.

I've found it is easier to understand file transfer if you consider that basically two kinds of files are stored in data libraries:

- ASCII files are usually text. These are files that can be read online by typing R followed by the file's name, such as R FARM.TXT. Or they can be downloaded and read offline with a word processor.
- Binary files usually are programs (although sometimes text is compressed in a binary form to save space in the data library and downloading time). Unlike those in ASCII, binary files generally *cannot* be used online; instead, they are to be retrieved for offline use.

Depending on options provided in your communications software, there are two ways available to retrieve material from CompuServe:

- An ASCII capture, sometimes called a *buffer dump*, in most communications programs, involves a command that tells the program to save all incoming text—that is, everything that will be displayed on the screen—to a file on the disk. The file later can be viewed with a word processor.
- Binary file transfer, often called *error-free transfer,* involves a clever computerized dialogue between your computer and CompuServe and is designed to help you get around occasional static on the telephone lines. CompuServe's B Protocol (built into its Professional Connection and VIDTEX software and a growing number of third-party programs), XMODEM (written by Ward Christensen of Chicago and considered the *de facto* standard for such communications) and Kermit (developed by Columbia University for Computing Activities) are three popular binary transfer methods, all supported by CompuServe.

Binary transfer protocols (whether B Protocol, XMODEM or Kermit) provide error-checking in downloading this way: CompuServe sends a block of data and your computer captures it. Then CompuServe and your computer compare notes to see if what was received exactly matches what was sent. If not, the block is sent again; if they do match, CompuServe moves on to send the next block of data until the entire file has been received by your computer and confirmed.

By contrast, the ASCII capture is not as sophisticated—no such error-checking is done. Instead, everything received by your computer—including any garble generated by static on the phone lines—is saved.

Both procedures have a place in a smart telecomputerist's toolbox. The ASCII method can be used for informal downloading of text, when an occasional garbled character doesn't matter to you. ASCII is valuable because it can capture material from a number of different places on the system.

On the other hand, the more precise binary file transfer should be used every time you download a program from a data library. Since a single glitch on the telephone line can render a downloaded program inoperable, you'll want to have the protection of error-checking whenever you retrieve software. The binary method also should be used for downloading long textfiles or to guard against garble.

Once you've found a file in a data library that you want to retrieve, type the command DOW (for download) followed by the file's name, as in DOW FARM.TXT. Now the system displays a menu from which you are to choose a protocol for the capture.

If your terminal program supports B Protocol (as Professional Connection does), select Option 2. If it supports XMODEM for downloading, choose Option 1 from the menu. CompuServe A Protocol is an older version of the transfer method still supported by a few communications programs. The fourth option—DC4/DC2 Capture protocol—is the ASCII method we've discussed. Select it only if you're capturing a textfile. The remaining protocol, Kermit, is a relatively new option here, introduced to CompuServe users in late 1987. If your communications program supports Kermit, select Option 5.

Once you've made your selection, the system is ready to transmit the file to you, and it is at this point that most beginners encounter problems.

A common mistake is specifying incompatible protocols. The transfer won't work if you select B Protocol from the system's menu and then tell your terminal program to save the incoming file by XMODEM. B Protocol and XMODEM handle their error-checking in different ways. In other words, the same protocol must be used by both CompuServe and your computer for a successful download.

Once you've instructed your computer to retrieve the file with the same protocol used by CompuServe, your machine *probably* will display the progress of the download—the number of bytes or blocks of data received so far, for instance—but the display differs in each terminal program.

When the download is completed, CompuServe prompts you to press the Return key to continue and then displays the data library prompt or menu. After you're offline, you can use the file you've downloaded.

In some forums, data library files often are compressed into "archive" files to save space and download time. This means that a number of smaller files have been squeezed and packed into a single file. Such files usually are identified by their extensions. In the IBM Users Network, for example, the extension of compressed files is .ARC, as in FARM.ARC. To retrieve these "archived" files, download them with a binary protocol. After you're offline, you'll need to use certain utilities to unsqueeze and unpack them. Bulletins from the forum administrators and the descriptions of the data libraries subtopics usually provide names of these small utilities that should be downloaded for your software toolbox.

As mentioned, the ASCII download method, while not as sophisticated as error-checking procedures, is flexible in that it can be used in various areas of CompuServe. As you saw, you can indicate an ASCII procedure by selecting Option 4 from the download menu above. In addition, ASCII captures can be done when reading a textfile online.

Suppose you want to read and capture FARM.TXT in a data library. You could type R FARM.TXT and, before pressing the Return key, type the commands that tell your terminal program to capture the following on disk. Then press the Return key to instruct CompuServe to "read" the file.

The same method can be used outside the data libraries. If you wanted to capture a story from the *Online Today Daily Edition* menu, for instance, you could type the option number and, before pressing the Return key, tell your communications program to capture the incoming in ASCII.

Charles Bowens, a contributing editor of Online Today, *co-authored* How to Get the Most Out of CompuServe *and* CompuServe for IBM PC Power Users. *His CompuServe User ID number is 70007,411.*

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*Professional Connection requires an IBM PC or compatible computer, a 360 KB disk drive or larger (double-sided), MS DOS 2.0 or higher, 320K memory, a modem, and a monitor. Display requirements: Color Graphics Board, Enhanced Color Graphics Board, Monochrome Board, Paradise Board, Hercules Board, the display built into the Tandy 1000, 2000, or Data General One. IBM is a registered trademark of International Business Machines Corporation. CompuServe and Professional Connection are trademarks of CompuServe Incorporated. ©1987 CompuServe Incorporated

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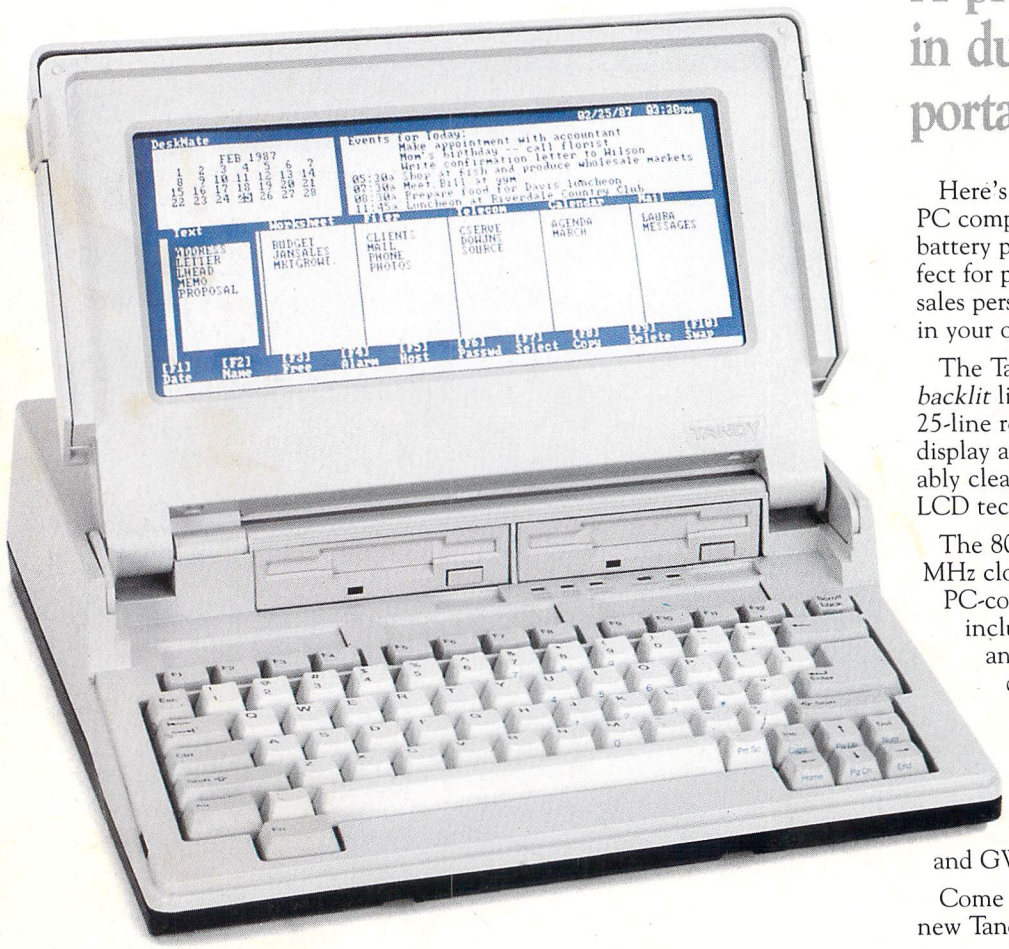
The Tandy® 1400 LT

A price breakthrough in dual-disk MS-DOS® portable computers.



Here's a portable computer that's a true IBM® PC compatible. With a removable rechargeable battery pack built in, the Tandy 1400 LT is perfect for people on the go—like busy executives, sales personnel and journalists. Or you can use it in your office like a desktop computer.

The Tandy 1400 LT features a high-resolution *backlit* liquid crystal display. The 80-character by 25-line resolution gives you the same quality of display as a full-sized monitor. And it's remarkably clear, thanks to the latest in "supertwist" LCD technology.

The 8088-equivalent microprocessor has a 7.16 MHz clock speed (vs. 4.77 MHz for most other PC-compatible portables). Standard equipment includes two 720K 3½" built-in disk drives and 768K RAM—ample memory to run today's powerful MS-DOS based programs.

The Tandy 1400 LT also includes a parallel printer adapter, RGBI and composite monitor outputs, a real-time clock and an RS-232C serial interface. You even get MS-DOS 3.2 and GW-BASIC.

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